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Contents of schemas of organizational performance: An exploratory study

El-Kazaz, Hussein Mohamed, Ph.D.
The Ohio State University, 1988

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CONTENTS OF SCHEMAS OF ORGANIZATIONAL PERFORMANCE
AN EXPLORATORY STUDY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of the Ohio State University

By
Hussein El-Kazaz, B.B.A, M.B.A

* * * * *

The Ohio State University
1988

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Approved by

GRADUATE BUSINESS PROGRAMS
IN THE NAME OF ALLAH

MOST GRACIOUS, MOST COMPASSIONATE
To my parents,
my sister and her family,
my wife and kids.
ACKNOWLEDGMENTS

Many individuals have contributed significantly to the research reported in this dissertation. First and foremost, members of the dissertation committee. My adviser Jeff Ford has been most instrumental in aiding me transform a vague idea about images of organizations into a finished study of schemas of organizational performance. Randy Bobbit and Bob Billings have offered many valuable insights and practical guidance. David Greenberger has not only been a very helpful member of the dissertation committee, but a true friend as well. To these four individuals I am most indebted.

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CHAPTER ONE

INTRODUCTION

The construct of organizational effectiveness is a central one in the study of organizations (Cameron, 86). It has been considered an ultimate criterion variable in research in which the independent variables included, among other things, context, structure, internal processes, and strategic decisions in organizations (Cameron & Whetten, 83).

Each of the studies that examined the effect of some variables on the effectiveness of an organization adopted a definition of what organizational effectiveness is. Consequently, effectiveness was measured along criteria derived from that definition. Numerous such definitions were adopted (Cameron & Whetten, 83), reflecting in part the numerous ways in which complex organizations can be conceptualized (Weick & Daft, 83). Some of the more prevalent definitions of effectiveness have stemmed from a goal perspective (Etzioni, 60); that organizations are effective to the extent they can achieve the few prescribed goals set rationally by managers. Other definitions have stemmed from a system resource perspective (Yuchtman & Seashore, 67); that organizations are effective to the
extent they can acquire and maintain critical inputs from their environments. Yet other definitions have stemmed from an internal processes perspective (Steers, 77); that organizations are effective to the extent they can attract, maintain and engage their employees in positive and developmental behavior. Recently, increasing writings adopt a multiple constituency approach to effectiveness (Goodman & Pennings, 77), in which different constituencies of an organization may adopt different models of effectiveness (Ford & Schellenberg, 82), and hence come up with different assessments of effectiveness.

Though adopting different conceptualizations, one disturbing feature is common to research on effectiveness from any of those, or other, perspectives. The vast majority of that research has not investigated assessments of effectiveness made by the members of the organization, or the models and bases upon which they make these assessments. Rather, researchers would typically impose their own definitions and employ their own preferred indicators. That in spite of writings which suggest that the assessments of effectiveness which members make are likely to be followed by decisions, actions, and attitudes which have serious implications for the organization (Connolly et al. 80, Romzek, 85).

The study reported in this paper attempts an exploration of bases upon which members of an organization
assess its effectiveness. The study benefits from literature in the areas of Cognitive/Social Psychology (e.g., Fiske & Campbell, 84), and Interpretive Sociology (e.g., Burger & Luckman, 66). Some of the arguments made in that literature are adopted and developed to suggest that assessing the effectiveness of an organization is seen as cognitive processing in which members attend selectively to certain experiences, label and categorize such experiences, attribute causes to different events, and retain selective experiences in their memories. These cognitive processes are guided by cognitive schemas which organize members' experiences with the performance of the organization. It is argued that among cognitive schemas relevant for assessing the effectiveness of an organization are schemas of organizational performance. Such schemas help direct the attention of their holders to aspects of the conduct of the organization that he would label as performance, and help him judge whether that performance of the organization reflects things the organization needs to do to be effective.

The exploratory study reported in this paper inquires about the content of these cognitive schemas of organizational performance held by different members of an organization. Among other things, the study examines the proposition made in the context of discussing effectiveness from a multiple constituents approach that members who
relate to the organization in similar formal ways assess its effectiveness on similar bases.

As an exploratory study of a construct unattended to in previous research, the study is limited to examining the content of these schemas rather than the processes by which they acquire these contents, or the more dynamic aspects of cognitive processing which involve such schemas. In other words, for reasons of focus, the study is a schema descriptive, rather than a schema processing study.

The next chapter represents a review of literature relevant to the study. Chapter three introduces questions, propositions, and hypotheses of the study. Chapter four explains the method utilized in examining the study questions. Chapter five explains the findings of the study, and chapter six discusses them.

Note

Throughout this document, the words he, his, and him are used to refer to both the male and female adjectives. This is done solely to facilitate both the reading and writing processes, and not to reflect any gender prejudices.
CHAPTER II
LITERATURE REVIEW

Preface

Assessing the performance of organizations is a major concern for managers of organizations, government officials, and other interested parties, particularly in a time of growing dependence on organizations (Goodman & Pennings, 77). Hence, it is not surprising that many writers have taken special interest in examining the topic of effectiveness. But in spite of their efforts, various assessments of the cumulative literature on effectiveness have agreed that the literature suffers from serious problems in conceptualizing what effectiveness is and determining how to assess it (Goodman & Pennings, 77, Cameron & Whetten, 81). Some writers have become so discouraged with the current state of the effectiveness literature. Some even suggested that the concept is of limited utility because it cannot be used to compare performance of different organizations, and that hence it should be abandoned as a research topic (Hannan & Freeman, 77). Although methodological issues (Dalton et al., 80) contribute significantly to the present status of effectiveness literature, a major source of disappointment
with the literature seems to be in the ways effectiveness has been conceptualized. The traditionally dominant approaches to effectiveness; the goal, system resource, and process approaches, have come under attack by various reviewers of the effectiveness literature (e.g., Connolly et al. 80, Cameron & Whetten, 83).

Preview of the chapter

The chapter is organized in four major parts. Part one examines various conceptualizations of organizational effectiveness. A review of the basic arguments of the dominant approaches to effectiveness, and some of the research based on them, is undertaken in the following few sections. Following each section, the major points of criticism leveled against each of the approaches are highlighted. The more recently emerging multiple constituency approach is then discussed. It attempts to deal with some of the major criticisms of the traditionally dominant approaches. However, after examining the arguments of that approach, and some of the research based on it, it will be argued that this research still shares one serious criticism with research from the other three approaches. That is, research adopting any of the four approaches have not adequately examined the bases upon which members of an organization assess its effectiveness. The last section in this part of the chapter discusses that serious drawback of research on effectiveness.
The first section of part two of the chapter will suggest that some research adopt a cognitive, social constructionist approach to address this important issue of bases of members' assessments of effectiveness. The remainder of that part elaborates upon this suggested approach using literature from Organizational and Social Cognitive Psychology. The last section of that part discusses how the present study adopts this social constructionist perspective. That is, members' assessments of effectiveness are seen as cognitive processing of performance related experiences by respective members of the organization. Such cognitive processing is guided by several relevant cognitive schemas.

In part three of the chapter, relevant literature on cognitive schemas is reviewed. Several variations of schemas examined by previous research in a number of fields are considered in an attempt to identify schemas relevant for assessing organizational effectiveness. The last section of that part of the chapter argues that schemas of organizational performance held by members of an organization are among the more relevant schemas in assessing effectiveness of the organization. The present study examines contents of such schemas held by members of an organization.

The fourth and last part of the chapter is devoted to a discussion of expected patterns of content of schemas of
organizational performance. One central proposition derived from writings on the multiple constituency approach is examined. That proposition would suggest that patterns of content of schemas of organizational performance are associated with patterns of formal membership in the organization. Literature from Interpretive Sociology is utilized in examining that proposition. The last section of part four will argue against the proposition of association between formal membership and patterns of content of schemas of organizational performance. That proposition is tested empirically as one of the questions of the present study.
Part One

Dominant approaches to organizational effectiveness

1. The rational goals approach

According to the goal approach, organizations are effective to the extent that they can achieve their designated goals. "..Serious goal setting represents an attempt at optimization of potentially conflicting organizational factors, in light of particular past and present circumstances and desired future" (Gaertner & Ramnarayan, 83, p.98). The way to assess organizational effectiveness within a goal approach is to develop criterion measures to assess how well the goals are being achieved (Campbell, 77).

Examples of effectiveness models derived from the goal approach are management by objectives and cost_benefit analysis. The basic assumption that this approach seems to be making is that the organization is run by rational decision makers who have a few goals they want to pursue (Campbell, 77).

Research adopting a goal approach

Many studies which attempted to examine determinants of organizational effectiveness adopted a goal approach in measuring effectiveness. For instance, when Hitt &
Middlemist (79) attempted to develop criteria for assessing subunit effectiveness that would enable comparative analysis of organizational units, they used organizational objectives as determined by key organizational managers to develop such criteria.

Jobson & Schneck (82) examined the relationships between various criteria of effectiveness of a police organization as seen by members of the organization and members of its external constituencies. To measure how various members assessed the effectiveness of the organizations, the researchers investigated how successful theses members thought the organization was in obtaining four goals: crime prevention, criminal apprehension, service to the community, and civility in interacting with citizens.

In examining the effectiveness of a state university, Lillis & Shaffer (77) estimated the income and employment impact on the state which resulted from the importation of federal grant and research funds by the university. Using an input/output analysis, the researchers concluded that the university competed well with corporate institutions in the private sector ($3.9 in federal funds resulted in $4.8 in indirect gross state product and the equivalent of 296 full time jobs, in addition to direct income and employment benefits). Their study represents an effort to develop hard economic measures to assess the university's success in
achieving goals of importance to the state. And their conclusion suggests that the university was indeed successful in achieving these goals. In a related way, Katz et al. (85) examined the relationships between characteristics of industrial relations systems, attempts to improve the quality of working life, and organizational effectiveness in 25 manufacturing plants. They too used economic criteria to judge the effectiveness of the plants. Fottler (87) also used financial outcomes and cost efficiency, in addition to patient satisfaction and clinical quality, to assess the effectiveness of health care organizations.

Criticism of the goal approach

The assumption that organizations adopt a few defined goals is a major source of criticism of the goal approach, "..if an organization is of any size at all, the demands placed on it are so dynamic and complex that it is not possible to define a finite number of organizational goals in any meaningful way" (Campbell, 77, p.20). The approach offers no insight on how the demands placed by the environment of the organization may affect the processes of goal setting, goal attainment, and performance evaluation, and how such effects are to be considered when assessing the effectiveness of the organization. It thus adopts a more or less closed system logic.

Such demands on organizations are dynamic, changing
over time, not only because of changing external circumstances, but also because of changes in the political makeup of the organization itself (Gaertner & Ramnarayan, 83). However, the goal approach reflects a vision of the organization as a homogeneous entity in which management as the recognized legitimate authority can, and does formulate few objectives uncontested by other parties. The approach thus ignores the potential for conflicting demands being placed on the organization by different constituencies (Connolly et al. 80). If this assumption of homogeneity is not adopted, then the dilemma posed by the question of effectiveness is which, and whose criteria are to be chosen as the yardstick against which the performance of the organization is to be evaluated (Scott, 77).

Writers adopting a goal approach often assume that goals are formulated through a rational process decision makers engage in, and that, once adopted, goals become guidelines for future actions. Weick (79) notes that goals are often vehicles for restructuring a rationale for behaviors and activities already carried on in the organization. In that sense, achieving goals is not a very suitable indicator of effectiveness, because it could only indicate a reinforcement of previous activities, not an achievement of a planned course of action.

Writers adopting a goal approach seem to make the assumption that the supposedly few goals of any
organization can be identified objectively by researchers and other observers (Etzioni, 60), while the argument can be made that "the observer decides a priori that the organization, group, or public under study is striving to achieve goals and to realize values he favors" (Etzioni, 60, p.274). The implication to this argument is that reports of goal attainment are as much reports on value preferences on part of the evaluator as they are reports on performance of the organization.

The assumption is also made that if certain goals are observed to be operative or dominant, they are to be considered the proper and correct goals of the organization (Anthony & Fong, 80). That, while examinations of performance of particular organizations suggest that they may be very effective in areas other than their proclaimed major goals. Cameron (80) for instance, noted that NASA was very effective in the sixties producing consumer goods, and that this aspect was never considered a criterion of success until much later when public criticism of the agency intensified.

2. The system resource approach

In contrast to the goal approach, the system resource approach adopts an open system perspective in which organizations are effective to the extent that they can secure their vital supply of resource inputs from the environment. So, paying special attention to the
organization's environment, this approach suggests that the organization adopts the overall goal of survival in that environment. Viewing the critical activities in an organization as those that affect the organization's ultimate ability to survive, this approach regards effectiveness of an organization as "...its ability to exploit its environments in the acquisition of scarce and valued resources to sustain its functioning" (Seashore & Yuchtman, 67, p.393). The organization must then adapt to internal and external changes in order to influence the environment and make it suitable for survival (Anthony & Fong, 80). The system resource approach, like the goal approach, would suggest that the identification of a relatively few criteria of effectiveness is possible and desirable. But rather than those criteria being the declared objectives of management, they should be selected carefully to reflect the organization's ability to secure critical resources.

Research adopting a system resource approach

Cunningham (78) measured the effectiveness of a number of local government organizations; police, fire department, community services, etc., on the basis of the each organization's ability to: 1. search out and respond to the properties of the external environment, 2. use its resources to produce outputs and to maintain and restore the system, 3. bargain and optimize its use of resources in
an environment with a number of decision-makers, each with a different objective. The data was collected by means of experts' judgments on the organization's ability to respond to the external environment, and a the results of computer simulations of the organization and its environment.

Provan (80) used the capacity of boards of directors to influence sources of fundings as a measure of the effectiveness of human service agencies. The study reported that the ability to have a powerful board of directors related to the effectiveness of the agency in terms of securing funds.

Shipper & White (83) measured internal organizational effectiveness on the basis of, among other things, acquisition of human and capital resources, and external effectiveness on the basis of the firm's competitiveness in terms of product acceptance and market share, and the degree to which it experiences economic fluctuations.

Pfeffer & Salancik (77) used resources allocated to a subunit (academic departments in a large university) as a measure of effectiveness of these subunits.

Criticism of the system resource approach

The different preferences that different parties in the organization may have as to selecting one source of inputs in the environment rather than others, or in favoring one strategy in dealing with such sources over others is not attended to explicitly in the system resource approach.
Also missing is the possibility that some parties in the organization may not adopt survival as the ultimate organizational objective, or that different parties may have different definitions of survival and survival requirements. Hence, the approach seems to share the implicit assumption of internal homogeneity of organizations that characterizes the goal approach. This contention of internal homogeneity is reinforced by the observation that selecting input acquisition as a critical requirement for survival within an open systems approach reflects an implicit assumption that "...the three basic processes in an open systems view of organizations—resource acquisition, transformation, and disposal—are tightly interconnected, so that overall effectiveness may be assessed at any point in the loop" (Connolly et al. 80, p.212). Like the goal approach, if one does not adopt the assumption of internal homogeneity of organizations, the system resource approach does not allow for the consideration of the processes which may result in favoring one set of effectiveness indicators over the others, and how such processes relate to the effectiveness of the organization.

Cameron (80) also points out that an overemphasis on effectiveness in resource acquisition in one set of environmental conditions may be detrimental to organizational effectiveness in the long run. This is so
because organizations may become so successful in one environment that they lose their adaptability to changing environmental conditions. He offers the example of several Swiss watchmaking firms which became the most effective because of their fine jeweled, handcrafted watches. Then .."the microcircuit and digital revolution caught them so resource rich in this one market that they found it almost impossible to switch domains" (p.69).

3. The internal processes approach

The internal processes approach to effectiveness concentrates on internal behavior of members of the organization rather than on its stated goals or how it should deal with its environment. In the terminology of the system perspective, the emphasis is on the transformation stage rather than the input or output ones, and the character of behavior of participants is seen as the critical factor in bringing about desired outcomes. Consequently, the effectiveness of an organization is to be assessed by examining three crucial requirements: First, its ability to attract and maintain a steady work force of qualified employees, second, its ability to secure dependable role performance from their employees, and third, its ability to engage employees in some form of spontaneous and innovative behavior (Steers, 77). Processes of supervision, job assignment, training, etc., must be designed to match the needs of the organization with the
needs of the employees throughout their evolving careers (Schein, 77). It follows that assessments of effectiveness are to be based on the organization's record in absenteeism and turnover, critical employee attitudes such as organizational commitment, levels of role clarity and acceptance, appropriateness of reward structure, and similar indicators. Toto (86) elaborated on such indicators and suggested that organizational effectiveness is manifested in eight characteristics: 1. clear understanding by employees of the company's purpose and direction, 2. performance standards supported by a good performance planning and review system, 3. the provisions of contingent monetary, developmental, and distinction rewards, 4. participation and teamwork, 5. coordination and cooperation among all organizational units, 6. formal support systems, 7. human resource development, 8. effective relations with the external environment. Consequently, lack of such requirements signals ineffectiveness. Scanlan (80) have identified the following points as signs of organizational illness: 1. authoritative approaches to supervision, 2. inequitable reward systems, 3. lack of clearly defined objectives, 4. inadequate communication systems, 5. poorly defined psychological contracts, 6. negative control systems.

Research adopting an internal processes approach Azma & Mansfield (81) examined the effect of
centralization, and market conditions on organizational effectiveness using a sample of 52 companies. The researchers measured effectiveness by means of a questionnaire mailed to the chief executive of each company. The questionnaire inquired, among other things, about leaders' psychological distance from subordinates, management concern for employee involvement, task orientation, and readiness to innovate. The study reported different results for the relationship between centralization and each of those behavioral measures of effectiveness.

**Criticism of the internal processes approach**

The approach overemphasizes one group of organizational members; immediate employees, and effectiveness is to be assessed through a set of indicators which reflect the well being of those employees. No attention is given to other members of the organization, or to any other external factors, which reflects either an implicit assumption of internal consistency and harmony between those employees and other members, or simply an implicit bias toward the preferences of immediate employees over those of other members.

Cameron (80) noted that it is important for the organization to be effective in terms of long term adaptation and innovativeness. Such qualities are often enhanced through conflict, rather than harmony and internal
cooperation of the type that the process approach values.

Summary of the major criticisms of the three dominant approaches

All three approaches have been criticized as imposing an assumption of homogeneity on organizations; ignoring the multiplicity of organizational members and the diversity of their demands on the organization. Both the goal and internal processes approaches have been criticized for their closed system logic that does not consider the interrelationships between the organization and its environment in assessing the effectiveness of the organization. The goal approach has been criticized for its overemphasis on rationality of decision makers in organizations, and of the role of goals as directing future actions. The system resource approach has been criticized with overemphasis on an organization's success in maintaining resources and support of one set of environmental conditions to the point of compromising the organization's effectiveness in being able to deal with changing environmental conditions.

Of this list of criticisms, ignoring the multiplicity of organizational members and the diversity of their demands on the organization seems to be especially problematic to research that evaluates effectiveness of organizations. That is, research that adopts any of the three approaches almost always has to make an arbitrary
selection of one set of organizational members, and measure the effectiveness of the organization from their perspective. Whether that group be managers, immediate employees, or an external party. Such an arbitrary selection puts a severe limitation on the possibility for broad, diverse, and realistic assessments of effectiveness. In response to this serious criticism, more and more writers in the area of organizational effectiveness are advocating a multiple constituency approach to effectiveness; one which recognizes the diversity of organizational participants.

4. The multiple constituency approach to effectiveness

One of the more recent developments in the area of effectiveness is the increasing reliance on a multiple constituency approach (Connolly et al, 80, Zammuto, 84). In contrast to the other approaches, the multiple constituency approach adopts a view of the organization as a coalition of multiple parties, in line with the work of Cyert & March (63), and allows for the possibility of each party having different preferences and advancing different self interests. It follows that several different assessments of the effectiveness of the same organization can be made simultaneously by different parties who have different aspirations and expectations of the organization, and hence employ different assessment criteria (Connolly et al, 80). Some of these constituencies may apply a goal approach in
their assessments, others a system resource approach, others a process approach (Ford & Schellenberg, 82).

Important consequences may follow assessments of effectiveness made by influential constituencies. The classical notion of contribution/inducements balance (March & Simon, 58) can be elaborated upon to discuss such important consequences. This notion suggests that participants of an organization contribute some valued resources to the organization, and get valued returns on their contributed resources. Unless the relationship between such contributions and inducements is satisfactory to the respective participant, they may consider withdrawing their support from the organization. Recently, Connolly et al (80) noted the resemblance between the idea of participants' satisfactions with the contributions/inducements balance, and the broader notion of constituents' effectiveness statements (broader in the sense that effectiveness statements need not be restricted to constituents' evaluations of their own direct transactions with the focal organization). The resemblance between the two notions is probably most evident in that effectiveness statements made by members are likely to be followed by actions that may affect the availability of the contributions of the respective parties to the organization, and the strategies they may adopt to deal with other members. Connolly et al. (80) raised as
empirical questions the possibilities that assessments of effectiveness by constituents be followed by some constituents becoming aware of their potential for shifting the distribution of satisfactions in their favor, and considering possible strategies, e.g., forming coalitions, to achieve more satisfactions and prevent other constituencies from bettering their positions. Given the seriousness of such possible consequences of assessments of organizational effectiveness strategic planners have been advised to take into account the demands of significant stakeholders (Mendlow, 83); for whose services there is no substitute.

In sum then, and in terms of the discussion of various criticisms of the goal, system resource, and process approaches carried on in the previous sections, the multiple constituency approach does not suffer from one of the most serious of these criticisms. It does not impose an assumption of homogeneity of organizations, or arbitrarily selects one set of members of the organization from whose perspective the effectiveness is to be assessed. The multiple constituency approach thus allows for a richer and more realistic analysis of the question of effectiveness.

Research adopting a multiple constituency approach

Tsui & Milkovich (87) examined the activities of the personnel department in a number of organizations. They conducted a three phase study in which they tested a
hypothesis on the differences between members of four major constituencies of the organizations in the activities they desire from the personnel department. In the first phase of the study, they used the Delphi technique to identify important activities performed by the department. In the second phase, they ran a factor analysis to identify dimensions of these activities. In the third phase, they examined differences between members of the four constituencies in terms of the importance they attached to each of the activities. Differences in the companies that members belonged to accounted for more variance in the importance attached to various activities than did their membership in different constituencies. However, significant differences were reported between the preferences of these four constituencies to support the viability of the multiple constituency approach in studying organizational effectiveness. In a related study, Hoy et al. (84) reported that little conversion was observed between the satisfactions of six different constituencies of an experimental organization.

Hoy, Van-Fleet, & Yetley (84) provided indirect support to the adoption of a multiple constituency approach. They found little conversion between assessments of effectiveness of small retail and manufacturing firms reached on the basis of three different models of effectiveness. Since the relative effectiveness of each
organization varied between and within the three models, the authors suggested that effectiveness is better treated as a multivariate concept examined via a given organization's constituencies over time.

Potential reasons for adopting one approach versus others

Quinn & Rohrbaugh (83) suggested a framework that sheds light on the question of why different writers would adopt different models of effectiveness. The competing values framework was developed by asking organizational theorists to judge the similarities of pairs of a number of widely used criteria of effectiveness (suggested by Campbell, 77). Multidimensional analysis was performed on the responses, and the conclusion was that effectiveness criteria can be sorted out on three value dimensions; internal vs. external focus, flexibility vs. control orientation, and means vs. ends emphasized. Quinn & Rohrbaugh (83) suggested that adopting one of the dominant approaches to effectiveness represents a certain preference along these value dimensions on part of the organizational theorist. They argued that the human relations model, the internal process model (which are typically combined and thought of as the process model in the effectiveness literature), the open system model (typically referred to as the system resources model), and the rational goal model are each adopted by researchers and writers who had different value preferences along the suggested three dimensions.
[It is interesting to notice that the question of internal consistency (vs. potential conflict among members or groups of members) did not come up as a value dimension on which researchers differed. This suggests that, for the most part, researchers who adopt one of the three traditionally dominant approaches to effectiveness adhere implicitly to assumptions of internal homogeneity. This empirical observation reinforces the points made in the earlier sections of this chapter when reviewing some of the basic arguments of the three approaches].

Related to having different value preferences, and probably stemming from such preferences, Cameron & Whetten (83) suggested that different writers envision different models of organizations. Therefore, they tend to adopt approaches to effectiveness which coincide with such models. They note that organizations have been conceptualized as networks of objects, rational entities in pursuit of goals, coalitions of powerful constituencies, individual need-meeting cooperatives, meaning-producing systems, information-processing units, open systems, collegiums, garbage cans, language games, psychic prisons, machines, social contracts, etc. It is therefore expected that research conducted under these different conceptualizations focuses on different aspects of performance, resulting in different models emphasized.

Gaertner & Ramnarayan (83) scheme for classifying
models of effectiveness provides another potential reason why different researchers may use one model of effectiveness versus others. One of the two dimensions they used to classify different measures of effectiveness was whether the intended use of the concept is general or organization-specific.

Strasser et al. (81) shed light on yet another reason why different writers may adopt different approaches to effectiveness. They suggested that different models of effectiveness differ in their historical and theoretical origins, as well as in underlying criteria and methods of application associated with each. For instance, they argued that the goal and system resource approaches differ in their historical and theoretical origins; the goal approach originated in engineering and economics, the system resource in biology and psychology. Their arguments suggest that adhering to one of the models versus others maybe due to the familiarity of the particular writer of certain fields of inquiry which tend to favor theoretical underpinnings and/or application methods of particular models.

Research which used criteria derived from more than one approach to effectiveness

Although writers tend to favor one approach to effectiveness versus other approaches for reasons discussed in the previous section, some researchers have combined
elements of more than one approach in their work. Noting the shortcomings of any one approach, these researchers have sought to broaden their conceptualization of, and measurement of, effectiveness by incorporating indicators of effectiveness derived from more than one approach. Gruber (86) criticized the reliance on single "objective" value of organizational goal attainment. He suggested the adoption of a three factor model of effectiveness which include internal coherence, and external political engagement, in addition to technical effectiveness.

Angle & Perry (81) examined the relationship between organizational commitment and organizational effectiveness. They used the following criteria of effectiveness: organizational adaptability; derived from a system resource perspective, turnover rate, tardiness rate, and absenteeism; derived from a process perspective, and operating cost; from a goal perspective.

Morrow (82) investigated the effects of organizational feedback on organizational effectiveness. She measured effectiveness on three major indicators derived from the goal and system resource approaches. Feedback measures were linked to goal attainment, superordinate approval, and lateral approval.

Edwards et al. (86) examined the effectiveness of a public agency with 30 local offices. They utilized the Quinn et al. competing values framework to derive
indicators of effectiveness from each of the value dimensions suggested by the model. Having derived these indicators, they conducted interviews and distributed questionnaires to assess the effectiveness of the agency along that multitude of dimensions.

A common criticism of research adopting any of the four approaches to effectiveness: No attention to bases upon which organizational members assess effectiveness.

Given the numerous ways in which effectiveness can be conceptualized, an interesting question of focus becomes very relevant. Should researchers who wish to examine the effectiveness of an organization impose their own conceptualizations of effectiveness on members of that organization, or should they investigate the bases upon which those members assess effectiveness? The question is especially relevant in light of the reported lack of convergence between assessments of effectiveness that are based on different models (Hoy, Van-Fleet, & Yetley, 84). That is, adopting one conceptualization may produce positive assessments of effectiveness while adopting another conceptualization may result in negative such assessments.

Consequently, the following scenario is quite possible. A researcher wishes to examine the effectiveness of an organization. He selects the indicators of effectiveness which stem from his conceptualization of effectiveness. He
collects data on these indicators. He reaches an assessment of the effectiveness of the organization. He reports that assessment. At the same time, though, a member of the organization, e.g., a ranking executive, is conducting his own evaluation. But he assesses effectiveness on different bases. He adopts a different model of effectiveness, collects data on a different set of indicators, and reaches a different assessment. Which of these two assessments is more "legitimate", and hence should receive more attention from whichever party is interested in the effectiveness of that organization? And to dramatize the question even more, one can incorporate the possibility that various members may have different models of effectiveness, and hence reach different assessments of effectiveness of the organization. Again, should the attention be given to these assessments by members, or to that by the researcher?

This scenario is not entirely a hypothetical one. In fact, this is what researchers of effectiveness, whose work is reviewed in the previous sections, have typically done. They would come to the field with their a priori definition of what effectiveness is, collect data on indicators of that definition, and report the results. Sure they would ask members of organizations for data on these indicators; sure they would ask them to respond to questionnaires and interviews that ask them whether the organization is fulfilling its objectives, responding to its environment,
or enjoying a healthy climate. Sometimes, members would be asked to provide economic, financial, and accounting data. But in all of these instances, members of organizations are providing researchers with information on the indicators of effectiveness that stem from conceptualizations adopted by researchers not members. To make matters worse, researchers' choice of models and indicators of effectiveness does not seem to have been guided by an even implicit attempt to match members' conceptions of effectiveness. In fact, one of the serious criticisms voiced over research on effectiveness is that choices of effectiveness' models are seldom guided by any serious thinking at all. Cameron (86) argues that .."evaluators of effectiveness often select models and criteria arbitrarily in their assessments, relying primarily on convenience". (p. 543).

Ignoring members' assessments of effectiveness, and the bases upon which they reach these assessments constitutes a serious drawback in the research on organizational effectiveness. Using the framework of the multiple constituency approach, assessment of effectiveness by members are most critical for the organization. Based on such assessments, members may consider strategies, make decisions, and take actions that are likely to have serious consequences for other members of the organization, and for the availability of resources that they control to the
organization (Connolly et al. 80). Some very critical attitudes of members may be influenced by their assessments of effectiveness. Romzek (85) studied the relationship between levels of organizational commitment of employees of federal, state, and local government employees and their perceptions of their agencies' effectiveness. She reports that the data indicate a firm support for the hypothesized relationship. Perceptions of effectiveness overshadowed the impact of agency alone on commitment.

It follows that research on effectiveness has for the most part failed to examine the assessments of effectiveness carried on by the individuals whose assessments are the most critical for organizations. Research has rather reported the assessments of outside researchers. One would not be exaggerating then to conclude that the conceptual map of writings on effectiveness that we have accumulated reflect for the most part the values, orientations, training, and cognitive complexities of the community of researchers (refer to the discussion in a previous section on reasons why different researchers may adopt different models), rather than reflecting how organizational members think about the performance of their organizations.

Possible reasons for not having investigated bases upon which members assess effectiveness

A number of possible reasons for researchers not to
have investigated bases upon which members assess effectiveness can be thought of. First, the question of level of analysis. Organizational effectiveness has traditionally been studied as a "macro" issue, an organization level phenomenon. With the traditional separation between macro and micro (individual level) issues, it is not surprising that researchers of effectiveness have not typically considered examining individual members' perceptions of effectiveness. It is not typical to examine macro level issues using micro level concepts. Even when researchers examining macro level issues need to collect micro level data, such data is typically aggregated and used to reach a collective, macro level conclusion. This kind of research practices may have been responsible for not motivating efforts to examine bases upon which members assessed effectiveness.

Even when a group of researchers (Mahoney & associates) attended to the importance of understanding how members assess effectiveness, this macro orientation hindered a full scale examination of bases of assessments of effectiveness. The work of Mahoney and his associates, e.g., Mahoney & Frost, 74, can be cited here as rare research that documented uses of different criteria of effectiveness by different members, but failed to examine the cognitive bases for such different criteria. That stream of research investigated factors related to the
application of different criteria of effectiveness by managers of different organization units, and suggested that managers working in different conditions, e.g., different technologies, emphasize different criteria of effectiveness. These findings contributed to our appreciation of the fact that managers adapt their perceptions of salient aspects of effectiveness to suit changing conditions, signaling that organization members do not operate on fixed, agreed upon models of effectiveness. However, the unit of analysis in these studies was the organization unit rather than the individual member (for instance, managers' responses were aggregated on the basis of types of technologies applied in a unit), and their findings were not nested in a theoretical framework that would help explain the bases for emphasizing different criteria by different individuals in different conditions. It is not enough to suggest that managers who work with different technologies use different criteria of effectiveness. An explanation should be given as to why this is the case. Why do managers think differently in those different conditions. Such an explanation could only be nested in a theoretical framework that has to do with why people "think" in certain ways. But such a framework falls under a traditionally micro orientation, and such an explanation was not offered. [Nevertheless, the work of Mahony and his associates remains pioneer and unique in its
recognition of the importance of examining the criteria upon which members of the organization assess its effectiveness].

Another reason why researchers have not typically paid attention to bases upon which members assess effectiveness is probably the dominance of effectiveness models which strive to reach a unitary assessment of the effectiveness of an organization. It has been cited in a previous section that the goal, system resource, and process approaches have been criticized for that tendency. When research is done utilizing one of these approaches, it is not surprising that bases of assessments used by members be neglected. That is, attending to such bases is likely to produce multiple assessments of effectiveness by different members, while the aim of the research is typically to produce one such statement. Consequently, it is expected that the increasing reliance on a multiple constituency approach in assessing effectiveness should be associated with more attempts to identify bases upon which different members assess effectiveness. In fact, another one of those rare occasions in which such bases were considered has come in a study that adopted the multiple constituency approach. The study by Tsui & Milkovich (87) (already reviewed in the section on research from a multiple constituency approach) examined the activities that members of different constituencies of a department desired from the department.
The study was confined to an examination of activities; domains of things the department may do, which is an important aspect of the bases upon which members are likely to assess effectiveness. However, the models of effectiveness employed by members were not investigated. Nevertheless, the study is a valuable contribution to our understanding of how to assess effectiveness of organizations by recognizing expectations of different members of the performance of the organization.

In sum then, two reasons were suggested for the general lack of investigations of bases of members' assessments of effectiveness. First, the artificial barrier between macro and micro issues. That barrier prevented the adoption of theoretical frameworks which explain how people think of their organizations, how they make sense of their experiences with these organizations, and the use of such frameworks to account for how members assess the performance of the organization. Secondly, the adoption of effectiveness models which strive to produce a unitary statement of effectiveness about any organization.

It follows that research that wishes to address this important issue of bases of effectiveness employed by members should adopt a multiple constituency approach, allowing for the possibility of multiple assessments of effectiveness by different members. Also, such research would benefit from theoretical frameworks that explain how
members perceive of, make sense of their experiences with organizations. The present study attempts to investigate bases of members' assessments of effectiveness, adopts a multiple constituency approach, and makes use of a cognitive, social constructionist perspective in understanding such bases. This perspective is discussed in the next part.
Part Two

Toward an approach to the study of the bases of assessments of effectiveness.

To examine the issue of the bases upon which different members of an organization assess its effectiveness, it is necessary to devote some attention to the nature of the processes through which members of an organization evaluate their experiences with the performance of the organization, and hence formulate assessments of effectiveness. It is through appreciating these processes that one can inquire about the bases that affect such processes. To shed light on such processes, writings from the area of Cognitive/Social Psychology will be utilized since such writings examine the processes by which people make sense of their social experiences (Fiske & Taylor, 84). In utilizing writings from this area, the present paper is joining an emerging tradition in the study of Organizational Behavior, recently referred to as Organizational Cognitive Psychology (Sims & Gioia, 86). This emerging tradition is characterized by viewing organizations as cognitively constructed social realities (Weick, 79), and by paying attention to the processes by which members of organizations construct such realities.
(Sims & Gioia, 86).

The general thesis derived from these writings in the context of the present study (which will be elaborated upon throughout this paper) is that assessing the effectiveness of the organization is seen as cognitive processing in which members perceive, encode, label and categorize, and make inferences and attributions of social clues. Managerial decisions and actions are among those clues. Such processes are guided by cognitive schemas of what organizational performance is. Hence, these schemas constitute bases upon which assessments of effectiveness are made. So, the study proceeds to examine the contents of these schemas held by different members of an organization.

To build the case for that thesis, and hence argue for the importance of examining schemas of organizational performance, the following sections present a review of selected literature on the notion of organizations as cognitively constructed realities, cognitive processes involved in constructing these realities, and the value of treating assessments of effectiveness as cognitive processing. Then part three of the chapter will examine role of schemas in cognitive processing in organizations, and the appropriateness of examining schemas of organizational performance as bases for assessments of effectiveness.
Organizations as interpreted, cognitively constructed realities

One of the images of organizations that has been adopted by writers from an Organizational Cognitive Psychological perspective is that of an enacted reality. In that image, organizations are networks of assumptions, systems of meanings, negotiated, socially constructed realities. That image is appropriate for investigating how members assess effectiveness. It allows for focusing on processes and constructs relevant for members' cognitive assessments of the performance of their organizations.

Weick (79) asserts that "..organizations are..the invention of people, inventions superimposed on flows of experience and momentarily imposing some order on these streams" (p.11 & 12). Organizational/social reality, insofar as it is recognized to have any existence outside the consciousness of any single individual, is.."little more than a network of assumptions and intersubjectively shared meanings "(Burrel & Morgan, 85, p.30 & 31). "Organizations exist largely in the mind, and their existence takes the form of cognitive maps. Thus, what ties an organization together is what ties thoughts together" (Weick & Bougon, 86, p.102). What takes place in organizations is emergent social processes created by the individuals concerned. Hence, students of organizations should seek explanations within the realm of individual
consciousness and subjectivity, within the frame of reference of the participant as opposed to the observer of action. That is, since people's lives and behaviors in organizations are continuations of their lives and behaviors outside organizations (Weick, 79), there is no reason to conceive of organizational realities any differently than one does social realities in the more general sense, as realities that people enact and deal with. "People in organizations repeatedly impose that which they later claim imposes on them" (Weick, 79, p.153).

Organizations are thus streams of experience that members bracket in their own minds; label, classify and interpret to make sense of. "..Organizations ..are convenient labels for patterns of activity" (Smircich & Stubbart, 85, p.726).

"..managers construct, rearrange, single out, and demolish many "objective" features of their surroundings. When people act they unrandomize variables, insert vestiges of orderliness, and literally create their own constraints" (Weick, 79, p.164). "..the supposedly hard, concrete, tangible and "real" aspects of organizational life are dependent upon the subjective constructions of individual human beings" (Burrel & Morgan, 85, p.261). Such construction of realities is carried on through members' engaging in several cognitive processes that are facilitated and guided by cognitive structures (schemas) members hold.
Processes involved in cognitive construction of social realities

People attend to selective streams of social experiences, categorize and label them in unique ways, attribute causes to them, and retain and organize them in ways peculiar to the individuals. These cognitive processes are guided by cognitive structures or schemas that the individual holds (Markus & Zajonc, 86, Fiske & Campbell, 84).

Selective attention.

At any time/space, an individual attends only to a limited set of the numerous potential social experiences he may attend to (Neisser, 76). Such experiences are made up of the presence, actions, and other influences of individuals present in that time/space, including of course his own actions. Moreover, the limited set of potential social experiences attended to by the individual is unique to him. Other individuals sharing the same social setting may attend to quite different sets of potential experiences.

Research on social attention has demonstrated that unique experiences attended to by the individual are consistent with cognitive structures guiding the process of attention.

Cohen (77), for instance, showed a number of individuals a video tape of a person going through a daily routine. Some of these individuals were told that this
person was a waitress, others were told she was a librarian. Later, a recall test demonstrated that individuals recalled details of that daily routine consistent with the common stereotypes of behaviors associated with each of these two occupations. The conclusion of the research is that different organized previous cognitions about a social referent (in this case stereotypes of occupations) guided the attention process of different individuals, resulting in different experiences attended to by different individuals. The same conclusion was made by Zadny & Jerard (74) who used a tape showing two persons exploring a room, and gave different groups of individuals different descriptions of the two men; burglars, students, and friends. Individuals who were told the two men were burglars recalled more theft-relevant details than other individuals. Again the stereotype of a "thief" guided the selective attention of the individuals. Cohen & Ebbeson (79) aimed at a different variation of cognitive structures. They showed two groups of individuals a film of a person engaging in a daily routine, but told the first group to try to form an impression of the person in the film, and the second group to try to remember what the person did. Their logic was that the first group would activate a "person schemata"; cognitive structures of different kinds of personalities, while the second would activate an "event schemata"; cognitive structures of sets
of consequent events. They reported that the individuals in the second group did tend to remember more details of the behavior of the person in the film.

These pieces of research demonstrate that individuals attend selectively to the potential social experiences they may attend to, and that such selective attention is directed by the relevant cognitive schemas held by each individual.

Labeling, categorizing, and inference.

Individuals cannot process cognitively an infinite number of independent social experiences. Hence, they reduce the numerous streams of social experiences they may go through to a manageable size through the cognitive processes of labeling, categorizing, and inference. These processes too are guided by cognitive structures of what characteristics of social referents are associated with certain categories, and what qualities certain labels entail. And once an individual categorizes a person, an event, or any other social referent as a member of a certain group, he automatically assigns them the characters he perceives of that group. Hence, an individual may give different labels to the same action performed by two persons whom he places in different categories. Duncan (76), for instance demonstrated that when a white child takes an eraser from another child, his behavior may be labeled "assertive", while the same action by a black child
may be labeled "aggressive" by individuals who hold the common racial stereotypes. Markus et al. (83) showed a film containing stereotypically masculine behavior to two groups of individuals. The first group was judged before the test to hold self-schemas for masculinity, while the second was judged not to hold such cognitive structures. The first group were able to form global impressions of persons in the film, and gave more extreme descriptions, and more positive evaluations of these persons, than did individuals in the second group. This study suggests that grouping actions into categories, and assigning actors the characters of these categories, was enhanced when individuals held cognitive structures dealing with such actions (in this case self schemas of masculinity). Taylor et al. (78) found that individuals who listened to tapes of males and females playing the same roles consistently reported males to be more confident, analytic, and influential than females. Again, cognitive structures (in this case gender stereotypes) guided the individuals in grouping actions of males and females in different categories, and once that categorization took place individuals made inferences consistent with the stereotypes.

Attribution.

People make sense of the social experiences they attend to by assigning causes to various experiences. This
The attributional process is guided by the cognitive structures individuals hold of the expected causes of various events and behaviors, and expectations of how two or more causes combine to produce some effect. Kun & Weiner (73) showed that individuals generally attributed success on easy tasks, and failure on difficult tasks to either luck or ability. However, when they were confronted with cases of success on difficult tasks, or failure on easy tasks, they attributed such events to the combination of luck and ability. This research suggests that cognitive structures of what normally causes success and failure on both easy and difficult tasks guided attributions of success and failure in particular events. In similar veins of research, Cooper & Lowe (77) reported that success of a person not known to the attributor is generally attributed to ability, effort, or some other stable trait of the individual, rather than to external factors such as luck. Deaux (76) reported that success of males and failure of females was attributed to ability; an indication of the impact of the common gender stereotypes on the attribution process. Individuals also have cognitive structures of appropriate behaviors in different situations. Ajzen (71) reported that when behavior was in line with such common situational schemas, it was generally attributed to the particular situational constraints. However, when it was not in line with such schemas, it was generally attributed to the
actor.

The general conclusion is then, that individuals engage in attributional processes in which they assign causes to events and actions, and that such attributional processes are guided by the cognitive structures individuals hold of expected causes of such events and actions.

Memory retention and retrieval.

People get to retain in their memories only a small portion of the overwhelming streams of social experiences they may go through. Cognitive structures influence significantly what is to be retained in memory. Rothbart et al. (79) gave groups of individuals information that members of a certain group were friendly, or were intellectual, and then gave them items that were either consistent or inconsistent with these assertions. They reported that individuals tended to recall more schema-consistent than inconsistent items in a later recall test. Srull (80) argued that experiences do not have to be consistent with cognitive structures to be retained in memory, but that they only need to relate to them in any one of many ways, e.g., experiences inconsistent with schema may still be remembered because they are difficult to understand and thus remains in active memory for a long time. The point is then, that experiences which are completely irrelevant to cognitive structures will generally tend to be retained in memory much less than
schema-relevant experiences. Markus & Zajonc (85) also asserted that the accuracy of retrieval from memory is very high when the experiences retrieved are consistent with schemas.

Research on cognitive processing in organizations.

A number of researchers have attended to such cognitive processes as they relate to different aspects of behavior in organizations. White (81), for instance, examined some of Pfeffer & Salancick (78) ideas of how employees use clues in their social environments to develop perceptions of their tasks, as opposed to the notion of objective characteristics of tasks. Another group of researchers (e.g., Chako & Mckelroy, 83) looked into the kinds of attributions employees make when they receive positive or negative performance feedback, traditionally thought of as an objective educational device and corrective stimulus. In the area of leadership, Calder (80) advanced hypotheses to help explain why some individuals create impressions of leadership in others while other individuals do not. And Mitchell et al. (81) suggested some attributions that leaders are likely to make of poor performance of their subordinates. In examining newcomers' reactions to organizational settings, Louis (80) proposed surprise and sense making as key cognitive processes that newcomers go through. Another example of that line of writings is Brief & Downy's (83) examination of how previous beliefs about
organizational structures, e.g., why an organization would have a centralized structure, greatly affected the reactions of both organizers and members to such structures.

Assessing organizational effectiveness as cognitive processing

Since the reported study examines the bases upon which members of the organization assess its effectiveness, it is fitting to examine the question of effectiveness from the standpoint of these members to inquire how they make such assessments. And just as reactions of employees to feedback on their performance for instance was seen as the outcome of cognitive processing of experiences relevant to that performance (e.g. processes of attribution of positive or negative feedback in Chacko & Mckelroy, 83, study), assessing the effectiveness of the organization is seen in the present study as cognitive processing of experiences with the performance of the organization. That is, a member attends selectively to certain experiences with the performance of the organization, rather than considering every possible aspect of performance that one can attend to. Members in that regard are just like the subjects in Cohen's (77) study who attended only to selected information in the video tape they were shown. Also, a member categorizes and labels certain of the experiences with performance that he attended to, hence giving them
special meanings that other members may not give them. Such labeling is not much different from how some subjects in Duncan's (76) study labeled the behavior of a child "aggressive" while others labeled the same behavior "assertive". A member assigns causes to experiences with performance that he attended to and labeled in a certain way differently than he would have if he labeled these experiences differently. Again, such attribution is similar in nature to how subjects in Kun & Weiner's (73) study attributed what they categorized as success and failure on easy and difficult tasks to different causes. And a member retains in memory only a limited set of experiences with performance of the organization that he attended to. In that regard, the member is not much different from subjects in Rothbart et al.'s (79) study who remembered only some of the items of information which the researchers provided them with earlier.

Based on what the member has attended to of experiences pertaining to the performance of the organization, how he has labeled such experiences, which causes he has attributed to them, and which of these experiences, labels and causes he has retained in memory, the member assesses the effectiveness of the organization in a certain way.

In brief then, research on cognitive processing in organizations and other social settings has been utilized to argue that assessing effectiveness can be appropriately
seen as cognitive processing of performance related experiences.

As discussed in the previous two sections, cognitive processes of selective attention, labeling and categorizing, attribution, and selective retention are guided by relevant cognitive structures or schemas that a person holds (e.g., racial stereotypes in Duncan's study, and expected causes of success and failure in Kun & Weiner's study), and that differences in these processes may be due to differences in the relevant schemas that different individuals hold. More accurately, these processes are possible because people hold such schemas (Fiske & Campbell, 84). It follows that certain schemas held by organizational members guide cognitive processing of their experiences with performance of the organization. In that sense, such schemas are the cognitive bases of assessments of organizational effectiveness. It is thus fitting to inquire about the nature of such schemas in the present study which aims at identifying bases for assessments of effectiveness. To inquire about such relevant schemas, it is necessary to examine in more detail some literature on the nature, development, effects, and types of schemas attended to by writers in different areas. Only then can the nature and effects of schemas relevant to assessments of effectiveness be explored. The next part of the chapter attempts such an examination.
Part Three

Cognitive bases of assessments of effectiveness

Schemas and cognitive processing

As indicated earlier, cognitive processes are facilitated and guided by cognitive structures or schemas. Markus & Zajonc (86) define cognitive structures as "organizations of conceptually related representations of objects, situations, events, and of sequences of events and actions" (p.143). Neisser (76) asserted that these internal structures are necessary for all perceptions and cognitions. Moscovici (83) argued, along the same lines, that an event, concept, object or behavior that relates to a particular internal structure is more likely to be attended to and processed than one that did not, assuming an active cognizer; one heavily involved in constructing his own social reality. Markus & Zajonc (86) summarized some of the ways cognitive structures are involved in construction of social realities"

"(they) simplify when there is too much, and thus they allow the perceiver to reduce an enormously complex environment to a manageable number of meaningful categories. They fill in when there is too little and allow the perceiver to go beyond the information given. These structures help the perceiver achieve some coherence in the environment and in the most general sense provide for the construction of social reality" (p.143).
Development, growth and change of schemas

Schemas derive from past experiences with many instances of the referents they represent. More accurately, they develop out of the cumulative experiences associated with previous cognitive processes of attending to, perceiving, labeling, inferring, and retaining information about that referent.

The more experiences one has with any referent, the more abstract cognitive structures become (Abelson, 76). Fiske & Campbell (84) offer an analogy:

"Consider how people learn an abstract driving schema from experience with concrete instances. The first car you try to drive has a certain feel to the clutch, a certain shift pattern, and the headlight switch in a certain place. Your driving schema is likely to be very concretely limited to that car until you have driven several. The more cars you drive, the more abstract and general your conception of clutches, shift patterns, and headlight switches." (p. 173).

The same is true for social schema that evolve from concrete to abstract, e.g., learning the ropes of an organization (Martin, 82).

Also, the more experiences, the more complex the schemas become. To use the driving analogy again, the more one drives, the more dimensions of cars become important to him in evaluating them. From merely considering color and comfort, one learns to consider factors ranging from mileage and safety to whether its steering is tight (Fiske & Campbell, 84).

Mature schemas are also more organized than newly formed ones. That is, they contain more links among
schematic contents, and possibly a more complex hierarchy (Larkin et al., 80). Thus, compared to a novice, a race car driver would know the proper way to understand the mechanic's comment that his distributor bushings were worn. The diagnosis would fit in compactly with other knowledge about the electrical system, rather than sounding like a bizarre form of insult. Consequently, it would be understood and remembered better and faster by the expert driver (fiske & Campbell, 84). And one consequence of holding well-developed cognitive structures is that, despite the greater amount and complexity of knowledge, their compact and well-organized quality frees processing capacity. Hence, experts in a particular field notice, recall, and use schema-discrepant experiences more than novices do. In contrast, novices' simple, ill-defined cognitive structures limit them to the more obvious schema-consistent experiences (Fiske et al., 83).

Once enacted, schemas are resistant to change, even in the face of strong disconfirming evidence. Ross et al. (75) conducted a study in which a group of individuals were told that a new personality test showed them to be especially socially sensitive; presumably they may have activated or begun to build a self-schema of being socially sensitive. The study shows that when they were informed that the test was in fact not genuine, they continued to think of themselves as socially sensitive. And if no new experiences
are encountered, but the person simply thinks about the subject, the existing cognitive structures are likely to get even more confirmed. For example, if one has a well-developed schema for some area of knowledge, mere thought of any sort polarizes judgments in whatever direction the judgments already tend (Tesser, 78).

One implication of this argument in the context of the present study is that schemas that are relevant for assessments of effectiveness may be fairly stable. If a member adopts a certain model of effectiveness, and hence looks for certain indicators in the performance of the organization, one would expect some consistency over time in applying the same model and looking for the same indicators.

**Emotions and behaviors associated with schemas**

Fishbein & Ajzen (75) presented a model in which they proposed that cognitions precede attitudinal and behavioral responses. This section will review research illustrating that schemas do not only guide people's perceptions and cognitions, but also influence how they feel and behave.

Fiske (82) reports on a research program that was aimed at exploring affects related to schema. The researchers started out by exploring the contents of some relevant person schemas, and the kinds of prevalent affects associated with them, e.g., got their subjects to describe their favorite romantic types assuming that people who fit
the descriptions would be highly liked by the subject. Then, they presented subjects with people who varied in their degree of match to the schema. They finally assessed the affects that different matches produced in their subjects. The researchers applied that general strategy to three social situations; initiation of close relationships, forming impressions of politicians, and campus stereotyping. And although each of the three studies lent only qualified support to the notion that affects were directly associated with fits to different schemas, taken together they indicate the usefulness of the schema-affect proposition, and its superiority to rival explanations of the findings (Fiske, 82).

Weiner (82) lends indirect support to the association between cognitive structures and emotions. He argues that causal attributions (which have been argued in a previous section to be guided by cognitive schemas) are associated with various emotions. He compiled empirical evidence from studies of attributional processes to support the hypotheses that:

"1. pride and positive self-esteem are experienced as a consequence of attributing a positive outcome to ego-related aspects of the self. 2. Anger is experienced given an attribution for a negative, self-related outcome or event to factors controllable by others. 3. Guilt is experienced when one has brought about a negative consequence for a personally controllable cause. 4. Pity is felt when others are in need of aid or in a negative state due to uncontrollable conditions" (p.190).

In sum then, some empirical evidence supports the
general notion that cognitive experiences associated with various cognitive processes and structures can be associated with different affects and emotions.

In the context of the present study, one implication of such suggested emotional effects of cognitive schemas and processes is that members' assessments of effectiveness are likely to be associated with positive or negative affects toward the organization. It can be argued that positive affects may relate to attitudes like organizational commitment, and that negative affects may relate to withdrawal (absenteeism, turnover, etc.). Assessments of effectiveness may thus be related to important attitudes and tendencies on part of the respective members. The study by Romzek (85), reviewed in an earlier section of this chapter, supports this contention. She reported a strong relationship between perceptions of organizational effectiveness and levels of organizational commitment of employees of public agencies.

An applied study in the area of political science provides some support to the argument that by organizing a person's experiences with important referents, schemas may be related to strong behavioral tendencies.

In May of 75, a Cambodian gunboat seized an American merchant ship in transit from Hong Kong to Sattahip with 40 crew members on board. That incident started an international crisis which involved a small invasion of a
tiny Cambodian island by the U.S. marines. The Cambodians announced their intention to free the ship almost by the same time the Marine invasion was getting underway. The marines were faced with stiff resistance, the American forces lost eighteen men, and nine out of ten helicopters used in the invasion were either shot down, ditched, or damaged so severely. In analyzing the American government handling of the crisis, Lamb (85) asserted that the rescue mission was "a hasty, risky, ill-conceived action not commensurate with publicly stated objectives" (p.682). Lamb also asserted that the course of actions that took place in the crisis was predictable from common knowledge of the belief systems of the four key decision makers in the crisis. Reviewing the voting records, public and off the record statements, and personal autobiographies of president Ford, secretary of state Kissinger, secretary of defence Schlesinger, and deputy of national security affairs Scowcroft, the author makes a strong case for the predictability of the crisis events from the belief systems of these four individuals. That is, they voted for, lobbied for, stated and argued for the use of power in Indochina to preserve the image of the United States as a world power, reinforcing confidence of American friends and deterring adversaries. It could be argued then that these schemas of national images, and appropriate means to protect them, affected the choice of crisis handling strategies by
members of the administration.

Again, an implication of this argument in the context of the present study is that contents of schemas relevant for assessing organizational performance, and the assessments of effectiveness by a member of a particular organization, may be associated with certain behavioral tendencies. Such tendencies are consistent with the content of these schemas, and the nature of the assessments. This argument therefore supports the possibility suggested from a multiple constituency approach that assessments of effectiveness by members may lead them to make decisions, formulate strategies, and take actions of serious consequences for the organization, e.g., forming a coalition with other members to enhance the organizational effectiveness in delivering their demands (Connolly et al., 80).

Variations of schemas:

In search of schemas relevant for assessments of effectiveness

Many writers have investigated cognitive processing of experiences with various referents in many different contexts. Consequently, different writers have suggested different variations of schemas. An examination of some of
these variations is carried on in this section to lay the ground for a discussion (in the following section) of variations of schemas proposed in this study to be relevant to assessing organizational effectiveness.

Content-specific and content-free schemas

To begin with, Cognitive/Social Psychology distinguishes content-specific schemas from content-free procedural schemas. The former organize cognitions about certain social objects (Fiske & Campbell, 1984). The latter operate like processing rules or procedures that specify links among items of information but not much of the rich informational content itself. Examples of procedural schemas suggested in the literature are balance schemata, which decide whether a number of related cognitions are consistent or not, linear ordering schemas which organize transitive, hierarchical relationships (Fiske & Campbell, 1984), (for example, if person A runs faster than B, and B runs faster than C, then A runs faster than C), and causal schemas suggested by Kelley (1972) as rules for attributions that people make of related events. Such procedural schemas provide the person with some cognitive guidelines that help him simplify and make sense of patterns of social experiences regardless of the specific content of such experiences.

Variations of content-specific schemas

Several variations of content-specific schemas have
been suggested. Some of the more prominent of those variations are schemas of individuals and groups of individuals, schemas of events, schemas of social roles, and schemas of other social entities:

**Self schemas**

One of the more evident variations of schemas of individuals are self schemas. That is, most individuals have clear conceptions of themselves on some attributes and less clear conceptions of others. Markus (77) indicates that people are self schematic on dimensions that are important to them, on which they think of themselves as extreme, and on which they are certain the opposite does not hold. Thus, if hard working is important to a person, and if he thinks of himself as extremely hardworking and as not at all lazy, that implies he has accumulated considerable knowledge about himself on that dimension. On the other hand, if he does not care much about being independent, does not think of himself as independent, he is said to be aschematic on that trait. Self schemas play their significant role in instances of cognitive construction of social realities which involve the particular trait of which the individual is self schematic. Markus et al. (83), examined one such schema in a study (reviewed earlier) involving individuals who were self schematic on masculinity.
Schemas of other individuals

Other researchers have examined schemas that a person holds of another individual rather than of himself. Radelet & Roberts (83) examined the question of whether the image that inmates portray of themselves are seen by members of parole boards as reliable indicators of the candidate "true" self, and found that such images played significant roles in release decisions made by the boards.

Prototypes

A schema of a group of individuals is typically referred to as a prototype. "abstract set of features commonly associated with members of a category, with each feature assigned weight according to the degree of association with the category." (Cantor, 81, p.27). So, for example, a schema for the brave might include what brave people do, examples of brave individuals, and what subcategories of brave people there are. Some of these prototypes have been demonstrated to be widely shared. Cantor and Mischel (79) found that a group of students generated consensual prototypes for geniuses, introverts, and phobics. The role of such cognitive structures is limited to instances of construction of social reality which involve the particular category they represent. White & Prachuabm (83) reported that schemas of various ethnic groups; Thais, Muslims, and Chinese in Southern Thailand constrained the attributions of behavioral characteristics
of members of these groups.

Scripts

A schema of an event is typically referred to as a script. A script is a conceptual structure outlining the roles, objects, conditions and results that occur in a stereotypical sequence of events (Schank & Abelson, 77). Examples of such cognitive structures include scripts of visiting a doctor, taking an exam, taking a plane flight. When an individual thinks of such events, he thinks about them in a typical time sequence. Bower et al.,(79) gave the elements of the getting up and going to work script in an unusual manner; starting the car, then drinking coffee, getting up, and putting on a coat. When the individuals were asked to recall the story, they recalled it in the order of the typical script. Hence, scripts seem to affect cognitive processing of social experiences that usually take a certain time order.

Role schemas

Individuals develop cognitive structures which organize one's knowledge about appropriate norms and behaviors associated with certain social positions, e.g., a professor, a father. And these cognitive structures affect one's social experiences with people who hold such positions. Cohen (81), showed two groups of individuals the same tape of a woman having a birthday dinner with her husband. One group was told that the woman was a waitress,
while the other was told she was a librarian. individuals in the first group tended to remember her drinking beer, while individuals in the second group tended to remember her wearing glasses and owning classical records.

Schemas of other social entities.

Researchers examining a wide array of issues have studied schemas of social entities other than individuals and groups of individuals, events, and social roles.

Manheim & Albritton (82), for instance, examined how images of certain foreign countries in the American press may have been improved due to the efforts of professional public relations firms hired by the governments of these countries on the premise that "an improved national image can be translated into more concrete gains" (p.641).

Reynolds & Gutman (84) examined cognitive images that manufacturers try to portray of their products. Realizing that "the majority of product classes are comprised of products which do not differ from each other in any significant way" (p.27), they saw advertizing as "the creation and management of product imagery; that is, the set of meanings and associations that serve to differentiate a product or service from its competition" (p.27).

Studies of schemas in organizations

In organizational contexts, many examples of schemas of various social referents can be thought of. Weick (79)
Notes that,...

"Examples of schemata in organizations are abundant. They may exist as cognitive maps that members infer from their organizational experience...Even though people may build up schema anew each time they apply the schemata, they have to start this buildup with something. And it is that something, that assumption, that retrieved portion of the past, that can rather swiftly become elaborated into a schema that is like a previous schema and that has a controlling effect on what people perceive" (p.156_157).

However, only a few researchers have attended explicitly to schemas in organizational contexts:

Brief & Downey (83), for instance, inquired about schemas of organizational structures and investigated how organization designers design these structures, and how organization members respond to structural characteristics. They employed a retrospective analysis of organizational structures of Ford Motor Company and General Motors to argue that "implicit organizing theories" held by key decision makers in the two companies were directly related to the choices of structure that they implemented. Henry Ford put together a highly centralized company, William Durant (the founder of GM) designed a highly decentralized and loosely coupled company, while Alfred Sloan, who took over GM as president for operations after Durant implemented yet a different design; highly rationalized, integrated and complex. The authors suggested that the three individuals held distinctly different implicit organizing theories; "person's assumptions about why organizations are structured in the manner in which they
are", and that these theories were reflected in the structures they created. The authors also make the point that "even the most extensively structured organizations provide members with only a skeletal behavior guide...thus, individuals exercise some discretion in acting out the details or their organizational roles" (p.1075). They then proposed that members view the organization structure and impute backward the intentions of the structures' designers utilizing their own implicit organizing theories. Finally, they hypothesized that the more similar implicit theories of the two groups, organizers and members, the more the intents of the designers get translated into desired behaviors by the members.

In a more direct investigation of members' schemas of organizational structures, Ford & Hegarty (84) inquired about decision makers' beliefs about the causes and effects of structures that a group of full time managers and a group of MBA students held. Arguing that such beliefs .."act as filters on how decision makers see the world by serving to explain the how's and why's of events" ..and.. "also influence action" (p.272), the authors examined beliefs about the context-structure-performance causal relationships. They employed the technique of cognitive mapping in which respondents generated maps of patterns or structures of assertions of causality among a set of variables representing technology, people,
structure, and performance. The researchers reported a high level of agreement between the aggregated maps of members of the two groups. In general, the flow of causality was consistent with the contingency-structure proposition that context precedes structure, which in turn precedes performance.

In a similar study, Ford & Kim (85) investigated causal maps of a group of practicing managers who belonged to different organizations concerning their beliefs as to the causes and effects of leadership. Arguing that .."situational characteristics are not so much "given" as they are constructed" (p.5), and that interpretive schemes provide the punctuation and bracketing leaders impose on flows of information to make sense of what is occurring, and that .."causal maps are a subset of schemata limited to causality relations among concepts" (p.5), the authors employed the technique of cognitive mapping to investigate these causal schemas. The set of variables that the respondents used to construct their cognitive maps consisted of two leadership variables and eight situational variables derived from the leadership literature. The respondents were asked to indicate their beliefs as to what they thought the causes and effects of leadership should be as well as what they thought these relations actually were. The cognitive maps thus constructed reveals consistency between leaders' beliefs and some basic propositions in the
literature on some questions, and inconsistencies on others. The maps also provided some interesting insights on the dynamics of leadership by following directions of causality between various variables that the leaders believed, e.g., increases in performance should be followed by less initiation of structure.

**Schemas relevant to assessing organizational effectiveness**

It has been argued that assessing effectiveness is seen as cognitive processing in which a member of an organization attends selectively to certain experiences of performance of the organization, labels and categorizes such experiences in certain ways, attributes causes to them, and retains only a portion of them in memory. It has also been argued that these processes are guided by cognitive schemas which organize these experiences in special ways. And after reviewing several variations of schemas in the previous section, the question that this section addresses is which variations of schemas are likely to affect cognitive processing of members' experiences with the performance of the organization, and hence represent the cognitive bases of assessments of effectiveness made by those members.

It could conceivably be argued that numerous variations of schemas are relevant to assessments of effectiveness by different members. For example, person schemas of
individual leaders of the organization may be relevant in some instances, or scripts of how certain tasks are to be carried on, e.g., introducing a product to a customer, or holding an interview with a job applicant. This is so because assessing the effectiveness of an organization is likely to involve processing numerous experiences with different aspects of performance of the organization, hence many variations of schemas may be relevant to such assessments. However, it is important in this study to try to identify schemas which are potentially most relevant to assessments of effectiveness so that the findings of the study can be used to draw a clear picture of the more influential bases of such assessments.

The approach taken in this paper to try to identify the more relevant schemas is to examine what was discussed earlier as potentially the more basic processes involved in assessing effectiveness, and then to suggest schemas likely to be relevant to these processes. That is, assessing the effectiveness of the organization involves attending to certain experiences and labeling them as constituting the performance of the organization, and judging whether these experiences represent "good" performance; represent things the organization needs to do to be effective. It follows that the most influential schemas are those which guide the member in attending to certain experiences and categorizing them as the performance of the organization, and in judging
whether these experiences reflect things the organization has to do to be effective. These schemas will be referred to in this paper as schemas of organizational performance. It is the content of such schemas that focuses the attention of the individual member on certain aspects of organizational conduct as constituting the performance of the organization, and in judging whether this performance is effective. As such, schemas of organizational performance represent strongly influential cognitive bases of assessments of organizational effectiveness.

In terms of the discussion of variations of cognitive schemas carried on in the previous section, the proposed schemas of organizational performance can be classified as schemas of social entities since they organize cognitions about an organization rather than just an individual, a social role, or a scripted event. But rather than representing a schema about the image of the organization in general, the proposed schema is specifically about the character of the performance of the organization. The present study is devoted to an exploration of such schemas of organizational performance.
Part four

Expected patterns of content
of schemas of organizational performance

To explore the content of schemas of organizational performance as cognitive bases of assessments of organizational effectiveness, it is essential to consider any major proposition that may suggest patterns of content of such schemas. One such proposition is recognized in this study. It stems from arguments made by proponents of the multiple constituency approach to effectiveness. The proposition has to do with who of the members of the organization are expected to assess effectiveness on similar bases. This last part of the chapter discusses that proposition. Literature from Interpretive sociology is utilized in examining the proposition. The outcome of that examination is then used and expanded upon in the next chapter to develop hypotheses for the present study.

The question of constituencies: is type of formal membership in the organization associated with patterns of content of schemas of organizational performance held by members?

Although the question of bases of effectiveness has not been adequately addressed in the literature on
organizational effectiveness, one proposition can be derived from the literature which suggests patterns of such bases.

A few writers have suggested that patterns of differences in bases of effectiveness assessments are expected to follow patterns of formal membership in the organization. In the context of discussing limitations of the three traditional approaches to effectiveness, some proponents of the multiple constituencies perspective suggested that these traditional approaches should probably be seen as special cases of the more general multiple constituency perspective. That is, different constituencies may be employing different such models to assess effectiveness. Managers, for instance, are more likely to employ a goal model, employees an internal processes model, and government officials a system resource model (Connolly et al., 80, Ford & Schellenberg, 82). This argument suggests that members who relate to the organization in different formal ways represent, in the terminology of the multiple constituency approach, members of different constituencies who are expected to assess effectiveness differently. Tsui (84), and Scott (77), suggested that this is the case because members who relate to the organization similarly have similar self interests in the organization, and hence are thought of as members of one constituency, versus other members who relate to the organization in
other ways and who hence have different interests (e.g., labor versus management, students versus faculty, consumers versus share holders). Therefore, members of such different constituencies are likely to have different expectations of the organization and to assess its performance differently (Tsui, 84, Scott, 77).

Such propositions have not been fully tested in research. The work of Tsui & Milkovich, 87, and Hoy et al., 84, reviewed in the first part of this chapter represent rare examples of research that have attempted to examine different criteria used by members of different constituencies in assessing effectiveness. As implied at the end of that first part, such research did not provide a sufficient account of bases of effectiveness employed by different members. This is because it did not utilize conceptualizations of the organization, and hence theoretical models and empirical findings, which allow for explorations of cognitive processes and structures relevant to assessments of effectiveness. Hence, that research could not provide adequate examination of whether members of formal constituencies make sense of experiences with the performance of the organization in similar ways; whether they employ similar schemas in assessing that performance.

By contrast, the approach adopted in this paper, that of considering assessments of effectiveness as cognitive processing of performance related experiences guided by
schemas of organizational performance, provides an appropriate framework for the examination of these propositions. That is, it allows for the exploration of what these propositions would mean in terms of the contents of these schemas, which can then be examined theoretically and empirically. Such an exploration is attempted in the next section.

**Formal membership and content of schemas of organizational performance**

The proposition of similarity of models of effectiveness used by members of formal constituencies suggests that such members adopt similar schemas of organizational performance. Such schemas are contrasted to those held by other members. To examine this implication, it is fitting to consider literature that addresses the media and processes by which members of social units may learn to share contents of schemas of social referents, and then to consider whether members of formal constituencies are likely to go through such processes.

**Processes and media involved in developing shared schemas**

Carrying on meaningful social interactions in established communities is virtually impossible if each individual had his own completely unique understandings of various aspects of social life. Hence, members of social units utilize media, and engage in processes aimed at creating shared understandings of the more significant
aspects of their social lives.

Language.

Members of a social setting communicate common features of social schemas by utilizing communication media available in day to day interactions between them. Among the most basic of such media is language. Words, names, analogies and metaphors all communicate contents of schemas and reflect images of various social referents. Berger & Luckman (66) argue that..

"language...typifies experiences, allowing me to subsume them under broad categories in terms of which they have meaning not only to myself but also to my fellowmen. For instance, I have a quarrel with my mother-in-law. This concrete and subjectively unique experience is typified linguistically under the category of "mother-in-law trouble". In this typification it makes sense to myself, to others, and, presumably, to my mother-in-law" (p.37).

In discussing how members of a society or culture acquire a sense of social structure that enables them to negotiate everyday activities, Cicourel (70) argues that people refer to certain interpretive procedures; tacit knowledge about "what everyone knows". Those interpretive procedures are embedded within the particular language."a child's vocabulary is filtered by his interpretive procedures". which develop prior to and during the period of language development (p.141). Again, social schemas are communicated via language.

A particularly relevant linguistic tool for communicating schemas is metaphors. Lakoff & Johnson (80) elaborated on how our definition, understanding, and use of
various social concepts is guided by metaphors which link those concepts to other concepts that have certain characters known to us. In other words they argued that metaphors help create schemas of various social referents by linking and identifying them in terms of known characters of other social referents.

"The essence of metaphor is understanding and experiencing one thing in terms of another" (p.5), "our concepts structure what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities...one way to find out [about conceptual systems] is by looking at language...most of our ordinary conceptual system is metaphorical in nature"(p.3 & 4).

Throughout their presentation, they offered many examples of aspects of social lives that acquire certain schemas through the employment of various metaphors. For instance, the act of intellectual debate is likened to military aggression through the metaphor "argument is war". Organizations are frequently described in metaphorical terms in ways that likely affect schemas of them that people have. Morgan (80) utilized this argument to show that certain metaphors paint very powerful images of formal organizations in the U.S.

Within organizational contexts, language and other organizational symbols have been recently identified as means by which members of an organization get to develop shared elements of schemas and related meanings. Gioia (86) attended explicitly to the role of symbols, mainly linguistic metaphors, in creating meanings that are then
retained in script schemas. Dandridge et al. (80) elaborated on how symbols like stories and myths, ceremonies and rituals, visual signs, anecdotes and jokes express "..the underlying character, ideology, or value system of an organization" (p.77).

Day to day and institutionalized interaction.

If language communicates schemas available to all members of a culture or a subculture, the day to day interactions between individuals provides a source of social schemas that is unique to the individuals engaged in the particular interactions. After asserting that individuals order their social lives through the use of typificatory systems, Berger & Luckmann (66) argue that .."the typificatory schemes entering into face_to_face situations are, of course, reciprocal. The other also apprehends me in a typified way as "a man","an American","a salesman","an ingratiating fellow", and so on. The other's typifications are as susceptible to my interference as mine are to his. In other words, the two typificatory schemes enter into an ongoing "negotiation" in the face_to_face situation"(p.30).

They offer the example of a person developing a schema of another person out of a stereotypical schema of the larger group of which the other is a member.

"If I typify my friend Henry as a member of category X (say, as an Englishman), I ..interpret at least certain aspects of his conduct as resulting from this typification - for instance, his tastes in food are typical of Englishmen, as are his manners, certain of his emotional reactions, and so on. Nevertheless, as long as my friend Henry is available in the plenitude of expressivity of the face_to_face situation, he will constantly break through my type of anonymous Englishman and manifest himself as a unique and therefore atypical individual - to wit, as my friend Henry" (p. 30).
This example illustrates the point that schemas develop through day to day interactions. That is, the basic reason for the schema of the other person to develop in the course of the interaction is the availability of richer experiences with that person. If my interaction with a fellow co-worker will expose me to more experiences of our supervisor, via listening to my fellow worker express his own views and experiences with the supervisor, then my schema of that supervisor is likely to develop. Personal daily interactions is thus a powerful media by which individuals gain access to richer experiences of the respective social referents, and hence develop and share their schemas of those referents.

Finally, it is important to note that a significant segment of the daily interactions between individuals, and the social schemas shared in the course of such interactions, is institutionalized. That is, the positions that individuals occupy as players of certain prescribed social roles vis a vis other individuals who are playing related social roles are associated with special modes of interaction and special shared schemas.

"Institutionalization occurs whenever there is a reciprocal typification of habitualized actions by types of actors..the typification of habitualized actions that constitute institutions are always shared ones. They are available to all the members of the particular social group in question, and the institution itself typifies individual actors as well as individual actions. The institution posits that actions of type X will be performed by actors of type X" (Berger & Luckman, 66, p.51).
What is being argued here is that certain social schemas are associated with occupiers of certain social roles; and that these social schemas are shared by the members of certain social settings.

Do members of formal constituencies speak unique languages and engage in unique interactions?

To examine the proposition that members of a formal constituencies employ similar models of effectiveness, i.e., in the context of the present study share unique schemas of organizational performance, in light of the literature on language and social interactions just considered, the question boils down to whether members of a formal constituency speak a unique language, and/or engage in unique social interactions. This is basically an empirical question about the processes involved in the development of shared schemas that goes beyond the boundaries of the current schema descriptive study. However, it is still possible to provide a general speculation on the answer to this question in light of routine observations of various organizations. This speculation can then be used to formulate expectations for the findings of the current study.

The general speculation made here is that it does not seem that members of a certain constituency have a language that is very unique to them, and is hence very foreign to other members of the same organization. Literature on
Organizational Cultures (e.g., Sathe, 84) lends support to this speculation when it speaks of organization wide use of linguistic symbols, suggesting that members of an organization share a common language.

As for day to day and institutionalized interactions, it makes sense to expect that managers and workers, for instance, do interact significantly enough for them to share elements of their schemas of important organizational referents. More importantly, differences in past experiences, in membership in different off and on the job social referent groups, and different cognitive orientations of members of the same formal constituency are expected to be significant. Hence there seems to be no strong basis to expect similarities in the content of schemas of such members anything beyond what they share with other members of the organization.

Based on these observations, it is not generally expected in the present study that patterns of contents of schemas of organizational performance will emerge which match patterns of formal membership in the organization. Nevertheless, it will still be recognized that similar formal membership may be accompanied by similarities in one aspect of schema contents, i.e., the aspect that is more likely to be affected by similarities in formal interests than any other aspect of the schemas. These expectations are spelled out in the following chapter, along with the
study question and propositions.
CHAPTER III
RESEARCH PROPOSITIONS, QUESTION, AND HYPOTHESES

As argued for in the previous chapter, assessing organizational effectiveness is seen as cognitive processing of experiences that the respective member has had with the performance of the organization. Such processing is guided by schemas which organize these experiences. Schemas of organizational performance are relevant for cognitive processing involved in assessing effectiveness since they focus the attention of the schema holder on what of the conduct of the organization is to be seen, labeled, and focused upon as the performance of the organization, and help the person judge whether that performance represents what the organization should be doing to be effective. These arguments are summarized in the following proposition:

Proposition 1

Schemas of organizational performance organize members' experiences with the performance of the organization, and as such, they represent cognitive bases of assessments of organizational effectiveness formulated by these members.

Contents of schemas are acquired through experiences that the individual has had with the referents of the
schemas (Fiske & Campbell, 84). Such contents are communicated between members of social units through symbols, linguistic and otherwise, and day to day and institutionalized interactions among these members (Berger & Luckman, 66, Lackoff & Johnson, 80). Members of an organization are likely to have had different individual experiences with the performance of the organization. They are also likely to have different cognitive orientations due to different past experiences. Such differences suggest that schemas of organizational performance are likely to have different contents for different individuals. Hence:

**Proposition 2**

Contents of schemas of organizational performance are different for different members of the organization.

Combining propositions 1 & 2:

**Proposition 3**

Observed differences in assessments of organizational effectiveness made by different members of an organization can be thought of as due to differences in contents of schemas of organizational performance held by these members.

Therefore, and since the proposed study is aimed at exploring bases upon which different members of an organization assess the effectiveness of the organization:

The research examines the question of content of schemas of organizational performance held by members of an
Aspects of contents of schemas explored

The study explores three aspects of the contents of schemas of organizational performance that are thought to be important in organizing members' experiences with the performance of the organization. These three aspects are the domain of activity that represents performance of the organization for the schema holder, the model of effectiveness employed by the member, and the individuals most instrumental in bringing about effective performance.

That is, for schemas of organizational performance to organize members' experiences with the performance of the organization, they guide a member in bracketing (Weick, 79) some of the streams of subjective experiences that he may see as performance of the organization, and label what he bracketed as the performance of the organization. Hence, one aspect of the content of these schemas is what that slice is, i.e., what of the numerous potential activities that the organization engages in is seen by the member as the domain of activities that constitute performance of that organization. Does a member of a University College take a set of activities that he labels as undergraduate teaching to be the main domain of performance of the college, or does he see graduate research as that domain?

Also, schemas of organizational performance incorporate the model of performance that a member employs in judging
effectiveness. What does the organization have to do to be effective in the domain(s) of activities which constitute its performance? What is the more critical character of the performance of the organization as seen by the member? Is it the execution of well thought through plans to achieve rationally chosen goals. Is it the nature of the processes through which these activities are carried on that matters? Or is it the quality of support that the organization enjoys from important elements of its environment? These different characters of performance represent criteria or models upon which the individual judges the quality of the experiences he attends to and labels as performance of the organization. The literature on effectiveness suggests the three traditional goal, processes, system resources approaches as competing such models of performance. Writings in the multi-constituency approach suggested that these may be models employed by different members. The study explores models of organizational performance that members hold.

The last aspect of content of schemas of organizational performance explored in the study is the individuals most instrumental in achieving effective performance. That is, schemas of performance are likely to incorporate causal relations between what is seen as effective performance and certain individuals, or groups of individuals, most instrumental in bringing about that effective performance.
If the schema directs the attention of a member of a college to the processes involved in teaching as the focus of effective performance, will he tend to identify faculty members for instance, or particularly senior faculty, as the group most instrumental in bringing about that effective performance? In other words, a schema will likely identify for its holder the persons who can live up to the requirements of effective performance as prescribed by the adopted model(s) of performance, within the domain(s) of activities labeled as performance. Therefore, individuals most instrumental in bringing about effective performance will be explored as a third aspect of the schemas of organizational performance in the study.

What of these aspects of schemas will be studied?

For these aspects of schemas of organizational performance, two questions will be examined.

First, what particular domains of activity, models of effectiveness, and sets of instrumental individuals are predominant in the schemas held by subjects? In that regard, the task is one of characterizing schemas that members hold into different categories of domains, models, and sets of instrumental individuals. These categories can only be appropriately considered in light of the particular focal organization(s) involved in a study. (What constitutes appropriate domains of activities in a University College is not necessarily appropriate in a
retail organization). Hence, the detailed discussion of the categories employed in the present study is saved to the method chapter, after the focal organization has been identified.

Secondly, the study will inquire about the indicators of effectiveness that stem from these predominant domains and models.

That is, it is important to inquire not only about the abstract contents of schemas, but also about the operationalizations of them in terms of indicators used by respective members to evaluate the performance of the organization. The abstract domains and models focus the attention of the member and provide him with a basis on which to evaluate the performance of the organization. But it is the indicators stemming from those domains and models that represent the specific demands that the member has of the performance of the organization. Two members can presumably adopt similar models and domains and yet gauge the performance of the organization against different specific demands. (E.g., two members of a University College may adopt a goal model, emphasizing planning, rational conduct, and the achievement of preset objectives. They may also emphasize the same domain; graduate level teaching. Yet, one of them may employ the number of graduates from graduate programs in the department and the average number of years they take to graduate, while the
other looks at the quality of publications of the students before and after graduation). Examining those indicators provides further appreciation of the bases upon which assessments of effectiveness are made.

**Expected patterns of contents of schemas of organizational performance**

It was argued in the last section of the previous chapter that there is no strong grounds for expecting that type of formal membership in the organization be associated with patterns of contents of schemas. In that regard, the notion of formal constituencies may serve as a convenient means of categorizing members for the purpose of clarifying the arguments of a multi-constituency approach to effectiveness for instance. Or it may serve as a basis for sampling various members of an organization, as is done in the current study. But it cannot serve as a basis for distinguishing members in terms of how they perceive the performance of the organization. People who relate to an organization in similar formal ways are not likely to carry the same schemas of what the performance of that organization is. However, one exception of this general expectation is suggested here in relation to the first aspect of schemas explored in the study; domains of activities identified as performance of the organization. That is, it was argued in the previous chapter that members of the same formal constituency share similar self
interests (Tsui, 84, and Scott, 77). This argument seems to apply particularly to the domains of activities that members attend to as performance. People who share self interests will probably focus on the same domains, the ones which give rise to these shared interests. If students of a college see their interests mainly in getting strong undergraduate education, versus faculty members who see their interests in developing their research potential and publish quality research, then the two groups will probably focus on different domains of activities. This expectation is supported by Tsui & Milkovich (87) study in which members of different formal constituencies were reported to emphasize different activities from a department. However, in the other aspects of schemas explored, this argument does not hold. There is no reason to expect members of formal constituencies to employ similar models of performance, or to attribute effective performance to the same individuals. Based on these expectations, the following three hypotheses pertaining to classifications of abstract contents of schemas are examined in the study: 

**Hypothesis 1**

Types of formal membership in an organization are associated with patterns of domains of performance emphasized in schemas of organizational performance of members of the organization.

This hypothesis suggests that the same domains of
performance are emphasized in the schemas of organizational performance held by members of a formal constituency, which are different than domains emphasized in the schemas of members of other formal constituencies

**Hypothesis 2**

Types of formal membership in an organization are not associated with patterns of models of performance reflected in schemas of organizational performance held by members of the organization.

This hypothesis suggests that models of performance emphasized in the schemas of organizational performance held by members of a formal constituency are not the same. Hence, models emphasized in the schemas of members of a formal constituency are not different than those of members of other formal constituencies.

**Hypothesis 3**

Types of formal membership in an organization are not associated with patterns of individuals emphasized in schemas of organizational performance held by members of the organization as instrumental in bringing about effective performance.

This hypothesis suggests that individuals emphasized as most instrumental in bringing about effective performance in the schemas of organizational performance held by members of a formal constituency are not the same, hence such individuals emphasized in the schemas of members of a
formal constituency are not different than those of members of other formal constituencies.

As for indicators of effectiveness, the study will inquire whether members of different formal constituencies who adopt similar models and domains employ similar indicators of performance.
CHAPTER IV

METHOD

Focal organization and participants

The College of Business at OSU is the focal organization in the study. Members of the College included in the study relate to the College as students, faculty, support staff, recruiting officers in companies hiring graduates of the College, and students of a local College of Business. The latter group represented once potential members who decided not to attend OSU, and were included to see if there are any differences in their schemas than those of their counterparts, students who decided to attend OSU.

The total number of participants in the study is sixty six. However, due to difficulties to be explained shortly, responses of only forty eight of them are used to draw conclusions of the study. Eleven of the forty eight respondents are students at OSU College of Business, nine are faculty members, eight are staff members, nine are recruiting officers in local companies who hire graduates of the College, and eleven are students at the College of Business at Capital University. The data collection phase of the study was done in the Fall quarter of 1987.
Students at both colleges were approached by an instructor of a class who offered them extra credit in one case, and monetary incentives (paid by the researcher upon completion of the interview) in the other. Contacts with recruiting officers were established by the placement office at the college, which provided references to officers in a variety of local businesses who recruit through the office. Three of these officers expressed lack of interest in participation, while the remaining nine, working in nine different local companies, were willing to participate. Faculty members, and staff members, were approached by the researcher who asked them to volunteer as participants in the study. There was a deliberate attempt to include faculty from different departments (the nine faculty participants work in six different departments), and staff members in different offices and positions. While the procedures followed in approaching participants from those formal constituencies do not satisfy the requirements of statistical random sampling, there is no reason to believe that these procedures have selected participants of a peculiar pattern of characteristics.

Research strategy and techniques employed to surface schemas of organizational performance

The research strategy used is a structured interview with participants. The interview has two major parts. In the first part, the Repertory Grid approach introduced by
Kelly in the Fifties is utilized, and in the second part, three more direct questions about the effectiveness of the organization were asked.

The Repertory Grid

The Rep Grid is a technique that requires respondents to make triad comparisons between a set of objects. Subjects are instructed to come up with bipolar statements in such a way that two of the three objects under comparison share the description at one end of the pole, while the third object is described by the opposite description at the other end of the pole. Making comparisons in this fashion gets the individual to reveal the underlying traits of these objects as he relates to them (Kelly, 63). Although the technique was originally used in the area of Clinical Psychology, it has been employed in several situations in Business applications (Stewart & Stewart, 81) particularly in Europe.

The technique is used in the current study to surface contents of schemas of organizational performance held by respondents. As explained shortly, the Grid is employed in this study by asking respondents to compare organizations they are familiar with, including the College of Business, in terms of things these organizations have to do to be effective. Then these comparisons are elaborated upon through a series a questions referred to as laddering down. The Grid was preferred over the other techniques that I
looked at as possible measurement techniques, i.e., multidimensional scaling, feature listings, and the self Q technique.

It was preferred over multidimensional scaling (MDS) (e.g., Blackburn & Cummings, 82) because the Grid does not impose any preset dimensions on the respondents as MDS does. That is, MDS would require presenting the participant with a set of statements, and then, in a later stage of the analysis, trying to make sense of the pattern of responses to those statements that the participant gave. The major disadvantage to using this technique in the present study is that the words and statements that would be used to surface schemas of organizational performance would not be the participant's, but rather those imposed by the researcher. This is not an appealing strategy in an exploratory study of schemas not studied in previous research. An essential element of the contribution of the study is in allowing the respondents to reveal their own words, labels, and statements in surfacing contents of the schemas.

The Grid was also preferred over the simpler technique of feature listing. Feature listing would ask the participant to give a list of features of the subject under study, in this case an effective College of Business. An analysis of these features would reveal content of schemas that the participant employs in assessing performance of
the College. This technique has the two obvious advantages of being much less time consuming than the Grid, and of being straightforward enough to allow for less complicated analyses of the responses. However, the Grid was preferred to feature listing because of the Grid's potential capacity to surface deeper dimensions of the schemas explored. That is, asking participants to engage in comparisons of different organizations gets them to reveal dimensions of their cognitive structures of those organizations that they would have not mentioned had they not engaged in such comparisons. These dimensions are not obvious enough, or close enough to his recollection for him to express them in a feature listing approach. Nevertheless, they are significant enough to his cognitive processing that they direct his comparing of the organizations under examination.

The Grid was also preferred over the self Q technique suggested by Bougan (83). Self Q technique requires the respondent to come up with questions about the concept under study, rather than respond to the researcher's questions. Encouraging the respondent to explore more questions on different levels as the interview goes on would allow the researcher to examine the respondent's causal map; causes and effects of the concept, by examining the content of successive questions he asks. This technique is particularly suitable for the investigation of cognitive
maps, and as indicated by Bougan, requires a good deal of rapport and cooperation on part of the respondent. The Grid was preferred over the self Q technique because the study does not aim specifically at uncovering cognitive maps of causes and effects of effectiveness. Also, the Grid does not require the kind of rapport and cooperation from participants required for the self Q, which is very difficult to gain from a relatively large number of participants who are not inherently committed to the study.

The Grid has been documented to have acceptable consistency. Field & Landfield (61), as well as Kelly (63) reported consistency rates ranging between 69% and 80%.

Procedure of the first part of the interview; the Grid

In the beginning of each interview, the participant was told that the purpose of the study was to find out more about how different individuals looked at the effectiveness of the College, and that the interview took about an hour on the average to complete, and a brief outline of the interview was explained. The respondent was then asked if he minded taping the interview for future accurate reference. When a respondent showed any signs of discomfort with this suggestion, which a few of them did, the suggestion was immediately dropped. Then the participant was asked to pick five organizations he was familiar with; four in addition to the College of Business. It was explained that the participant need not be a current member
to any of these organizations, but to be familiar enough with them to be able to draw comparisons. It was also explained that the organizations need not be of any particular size, type, complexity, or formality. Only three participants had difficulty coming up with four organizations they were familiar with. A wide variety of organizations was selected by the participants, ranging from the student sorority or fraternity to high schools they graduated from, from fast food places they once worked for part time to other colleges they recruit from, from professional associations to large firms they do consultation for, from the family business the spouse operated to the grocery store they shop at regularly.

Next, participants were asked to make triad comparisons between three of the five organizations at a time, with the College being one of them. To try to surface schemas of organizational performance; which were argued in the previous chapter to focus the attention of the holder on what he labels as the performance of the organization and to guide him in judging whether the organization is doing what it needs to be doing to be effective, the following standard instructions were given to participants: They were instructed to compare the organizations in terms of "things they have to be, or things they have to do, to be effective", so that two of the three organizations would be similar, and the third one would be different in any given
comparison. I made up the following example and showed it to each participant on a card to help explain the instructions:

A student was asked to come up with three significant persons in his life, and to compare them in terms of things they have to be or to do to be effective in their respective roles. He picked a friend, a teacher, and a car mechanic as significant people. He compared them as follows:

teacher & friend
need to be personal

vs.

car mechanic
be professional

teacher & mechanic
talk to explain things

vs.

friend
listen to you

Participants were told that they were expected to come up with comparisons similar in format to that example. They were further told that, at this stage of the interview, they did not have to worry about explaining what they meant by any of the comparisons, but to just give as many comparisons as they could think of. After that explanation, I would direct the respondent to the three organizations that he was to compare by giving him a card with the names of these organizations on, to hold it in hand while making the comparisons. As the respondent listed his comparisons, I would take notes of them. (The comparisons made by five respondents, as well as the explanations that respondents offered in the next phase of the interview, and answers to questions asked in the latter part of it are reproduced in
Appendix A as an example of how the comparisons were recorded). During this stage, I seldom interrupted except to clarify the procedure or to remind a respondent midway through this phase that he still needed to come up with bipolar statements as explained earlier, or that he still needed to compare organizations in terms of things they have to do to be effective. (That is, the majority of respondents would, after making the first two or three comparisons, start comparing the three organizations in their general character, e.g., their size, how they make one feel, who their personnel are, rather than in effectiveness requirements. My response to this was to remind the respondent once of what he should be comparing, and if that does not work, I would let him give the comparisons he is comfortable with, and then in the following phase of laddering down, I would ask him to explain how these bases of comparisons affected, or related to the effectiveness of the College. What this response suggests to me is that schemas of organizational performance are not readily distinguishable from schemas of what the organization is in a more general sense for many members).

When the respondent indicated that he has run out of things to say in that particular comparison, I would direct him to another triad of organizations to compare, always including the College. My Clue to end this phase of the
interview was when the respondent stopped coming up with any comparisons, and was just repeating previous comparisons with shorter pauses for thinking, or if he plainly expressed his inability to generate any new comparisons. The number of novel comparisons given by participants ranged from 3 to 32, with an average of 9.5, reflecting perhaps different cognitive complexities and different abilities to differentiate between subjects, as well as different numbers of dimensions of schemas of organizational performance held by different participants.

Next, "laddering down" was employed so that participants would explain what they meant by the comparisons that they gave unexplained in the previous phase. Here, I would concentrate on each novel comparison involving the College that the participant made in the previous phase, read it to him in his words, and then ask him to elaborate on what he meant by that comparison. If the content of the comparison was a general character of the organization rather than requirements of effectiveness, I would emphasize here that I wanted him to comment on this comparison in terms of what it means for the effectiveness of the organization. So, for instance, if the comparison said the College had a social atmosphere that is too impersonal, I would ask him to comment on what the College has to do to be effective, given his statement. (Appendix A mentioned earlier shows the comparisons that five
respondents made, and the explanations they gave of them during this phase of laddering down). About three explanations were given for each comparison on the average. These statements, along with answers to specific questions discussed in a following paragraph, constituted the raw data that was submitted later to qualitative analysis.

The second part of the interview: more direct questions

The Grid was chosen as the main technique to surface schemas of organizational performance. However, since more direct techniques are typically employed to investigate how people think of a particular concept, an interesting question was whether using such direct questions would produce any different information about how members think of the effectiveness of the College than what the Grid generates. One strong expectation was that the statements generated by the direct questions would be more specific and of a shorter time span than the ones generated by the Grid. If this was the case, then the direct questions would produce evaluations of the effectiveness of the college on specific points, whereas the Grid would be more capable of surfacing deeper schemas of what members consider to be performance, and how they evaluate it. To examine such an expectation, three more direct questions were asked of participants in the second phase of the interview. First, the respondent was asked to assess the effectiveness of the focal organization as he currently sees it on a scale of
one to five, with one standing for "very ineffective" and
five standing for "very effective". The respondent was then
asked to give as many reasons as possible why he assesses
effectiveness the way he does. Next, respondents were asked
to give examples of events in which they felt the College
was very effective or very ineffective. Finally,
respondents were asked to simply give a list of the factors
they would consider if asked to assess the effectiveness of
the College. (The answers given by five respondents are
shown as part of the responses in Appendix A). The answers
of these questions were submitted to qualitative analysis,
along with the statements generated by the Grid, as
explained next.

Data analysis

To be able to examine the hypotheses of the study;
whether formal membership in the organization is associated
with patterns of schemas of performance in the dimensions
of domains of activities (hypothesis 1), models of
performance (hypothesis 2), and individuals most
instrumental in bringing about effectiveness (hypothesis
3), two steps needed to be done:

1. The statements generated by the Grid, and those
generated by the more specific questions had to be
classified for every individual in terms of which domain,
which model, and what significant individuals were
reflected by the given statement.
2. These classifications had to be examined to see whether they are associated with patterns of formal membership in the organization.

The following two sections explain how these two steps were carried on.

Classifying statements

The help of three Ph.D. students in Business Administration was sought in classifying the statements. Prior to the beginning of the project, each of the three raters received a set of instructions outlining their task, and explaining how to classify the statements. A copy of that set of instructions is reproduced in Appendix B. An initial training session took place in which the raters discussed their task, the theoretical framework they were to use in classifying the statements to different models of effectiveness (to be discussed shortly), and a number of statements collected in a pilot test were classified by the three raters to ensure familiarity with the task.

The raters were instructed to classify the statements on three dimensions. For each dimension, a number of categories were defined, and raters were asked to assign each statement to one or more (or none) of the categories as they see fit. The following schemes were used to classify statements on the three dimensions of the schemas examined in the study:

1. Domains of activities reflected in the statements.
Raters were asked to classify each statement as to what type of activity the statement implies. Based on my initial examination of the data, I suggested the following categories to the raters: teaching, counseling, placement, social, research, and other. I suggested to the raters that they examine the first few statements and then decide whether they see a better classification. When they did not suggest other schemes, the one I suggested was employed for this dimension. To report their classifications on this dimension, as well as on the other two dimensions, the raters marked their choices on a report sheet that I prepared on which every line represents one statement (a copy of that sheet is reproduced as part of Appendix B).

2. Models of effectiveness. The three dominant models in the literature; the Goal, Process, and System Resources models were the obvious choice for the classification scheme here. After all, one of the study hypotheses examines a proposition made by proponents of the multi-constituency approach that members of different formal constituency apply different such models. The question was in how to classify the respondents' statements into these models, how to define the categories for the raters given the multitude of writings and definitions present in the literature. To deal with that difficulty, the competing value framework developed by Quinn and his associates, and discussed earlier in the literature review, was utilized.
Briefly, the competing values framework was developed by asking organizational theorists to judge the similarities of pairs of a number of widely used criteria of effectiveness (suggested by Campbell, 77). Multidimensional scaling was performed on the responses, and the conclusion was that effectiveness criteria can be sorted out on three value dimensions: internal vs. external focus, flexibility vs. control orientation, and means vs. ends emphasized. Quinn and associates (e.g., Quinn & Rohrbaugh, 83), suggested that adopting one of the dominant approaches to effectiveness represents a certain preference along these value dimensions on part of the organizational theorist. They argued that the human relations model, the internal process model (which are typically combined and thought of as the process model in the effectiveness literature), the open system model (typically referred to as the system resources model), and the rational goal model are each adopted by researchers and writers who had different value preferences along the suggested three dimensions. Consequently, Quinn and associates suggested a number of questions one can ask to figure out the preferences reflected in any given criterion of effectiveness, and hence what model that criterion represents. And this is where this approach came in handy for the present study. It provided a basis from the literature, developed empirically from input by organizational theorists, upon which the
raters can classify the statements made by respondents into one of the dominant effectiveness models. The raters were asked to read every statement, and ask the questions suggested by Quinn & associates, and based on their answers to these questions classify the statement into one of the models. A more detailed presentation of the approach, and a list of the questions used to classify statements are provided as part of appendix B which reproduces instructions given to raters.

3. Individuals most instrumental in bringing about effective performance. As done with domains of activities, I suggested the following categories to the raters: professors and other instructors, administrators, support staff, students, and others. Raters were asked to examine each statement and judge whether it reflects a primary role in bringing about effectiveness for one or more of these groups of individuals.

**Inter-rater disagreements**

Two of the three raters agreed on how to classify statements about eighty two percent of the time (computed by dividing the number of times two of them agreed by the total number of judgments they had to make). To resolve three way disagreements in the remaining cases, several meetings were scheduled during which the three raters discussed why they classified the particular statement on the particular dimension the way they did. They kept
discussing until two of them would come to share the same judgment. These meetings turned out to be very demanding in terms of time and mental energy, to the point that caused one of the raters to decide to stop participating in the study after forty eight of the sixty six interviews were analyzed. At that point, this phase of data analysis had already consumed two and half months and required the raters to meet five times to dissolve differences in judgments. Since the forty eight analyzed interviews provided enough cases for each of the groups sampled in the study, allowing for the examination of the hypotheses, and since no other time/ cost efficient alternative could be reached that would maintain consistency in data analysis procedures, the decision was made to examine the hypotheses of the study using only those forty eight cases.

As an example of the outcome of the processes through which raters classified statements, appendix C reproduces the final classifications of the statements made by the five respondents whose statements are reported in appendix A.

Analyzing differences between groups

After classifying the statements made by the respondents, I counted frequencies of time in which each domain, model, and group of individuals was marked by the raters for the entire set of statements given by each respondent. Next, I put these frequencies in tables in
which respondents were grouped according to the formal constituency they belong to. So, the frequencies of times in which the goal, process, and system resources models were reflected in the statements made by faculty members were put in one section of the table, while those made by staff members were put in another section, and so on. The same was done with domains and groups of individuals.

Placing these frequencies in such tables was in preparation for testing the hypotheses of the study using nonparametric statistics. That is, the hypotheses state certain expected patterns of the domains, models, and groups of individuals emphasized in the schemas of members of the different formal constituencies. A set of nonparametric tests were run on the frequencies associated with each domain, model, and group of individuals to see whether these frequencies reflected the patterns stated in the hypotheses. Nonparametric statistics were preferred over comparable parametric statistics on frequencies, namely Chi Square tests, because they make less stringent assumptions about the data. Chi Square, for instance, requires that the data points be independent, resulting for instance from independent experimental trials; a requirement clearly violated in the present study when comparing frequencies of times when different models were emphasized in statements given by the same person in the same interview. The nonparametric statistics used in this
study do not make such assumptions. Additionally, nonparametric statistics do not have the same requirements as parametric statistics that the underlying population distributions be normal, or that sample sizes be large to make tests robust to non-normality (Chi Square does not require normality either, but was eliminated due to the lack of independence just discussed). By not requiring normality, nonparametric statistics become less demanding in terms of sample sizes, making them particularly suitable in the present study where the data collection and analysis procedures almost forbid drawing large sample (thirty or more respondent per group).

To test the hypotheses of the study, three nonparametric tests were used. First, a test was run to examine whether members of the same group, e.g., faculty members, placed similar emphases on (for instance) the five domains of activity; teaching vs. placement, etc. The test used here was the distribution-free Friedman et al. test (Hollander & Wolfe, 73), which tests the null hypothesis that there are no differences in the frequencies scored by members of the group on the different domains, and hence that all the domains are equally emphasized. The test was run for each of the groups on the three dimensions of the study; domains, models, and individuals instrumental in effectiveness. If a significant difference was observed, i.e., the null hypothesis rejected, multiple comparisons
would be run to determine which pairs of domains were different. A parametric counterpart to this test is repeated measures analysis of variance of interval data.

The second test was run to examine whether members of different formal constituencies were similar in their emphases of a particular domain, teaching for instance, the distribution-free Kruskal-Wallis test was performed (Hollander & Wolf, 73). This test examines whether the values (in this study the frequencies) scored by each group allow for rejecting the null hypothesis that there are no significant differences between the groups in their scores and that they come from one population. One would not be able to reject that null hypothesis when the frequencies scored by members of one group are not consistently and significantly greater or smaller than those scored by members of other groups. This test was performed for each domain, model, and group of individuals instrumental for bringing about effectiveness. For each of these runs, the question was whether there were any significant differences in the frequencies scored by the different groups on this dimension. If a difference was observed, i.e., the null hypothesis rejected, then multiple comparisons would be run to determine which pairs of groups are different. A parametric counterpart to this test is one way analysis of variance of interval data.

These two tests were used to examine the hypotheses of
the study by inquiring whether: [1] a group displayed a pattern in the frequencies they scored on the five domains that was any different from the patterns displayed by other groups, i.e., they placed different emphases on the domains, and whether [2] different groups were any different in the frequencies they scored for any domain of activity for instance. If the groups displayed similar patterns of emphases on all the domains, and if they were not different in the frequencies they scored for each domain examined, then the conclusion would be that there is no difference between the groups in the domains of activities emphasized. The same logic applies to models, and groups of individuals instrumental in bringing about effective performance.

Implied in using these tests is the assumption that the higher the frequency of times in which raters agreed that a participant reflected the goal model in his statements, the more strongly emphasized that model is in his schema. In other words, if he is classified as having reflected on the goal model six times during the interview, while reflecting the process approach nine times, then the latter approach is taken in the logic of the test to be the one more emphasized in the schema. The rationale for that implied assumption is that participants selected organizations with which they were most familiar, and hence their comparisons between these organizations should reflect the more salient
aspects of their schemas. Therefore, it is expected that the number of times one model is mentioned in the course of explaining these comparisons reflects the degree of salience of that model in the schema he holds.

Finally, the Wilcoxon test (Hollander & Wolfe, 73) was performed to examine whether students of OSU were any different than students of Capital University in the emphases they placed on the different domains, models, and groups of individuals instrumental in bringing about effective performance. This test is simply the two sample case of the more generalized Kruskal-Wallis test mentioned earlier.

Exploring indicators of effectiveness

As mentioned in the previous section, specific indicators of effectiveness are examined along with characterizations of the abstract contents of schemas into domains, models, and instrumental individuals.

To explore those indicators, a qualitative analysis of the Grid generated data was performed. For the purposes of this analysis, I looked at the statements in terms of how they were classified by the raters, and examined effectiveness indicators revealed in these statements. I classified those indicators on the basis of the combination of domain/model to which the statement was assigned. So, if a statement was assigned as reflecting a teaching domain and a goal model, I would classify the observed indicators
of effectiveness as indicators stemming from a teaching/goal schema. Further, I classified those indicators on the basis of the formal constituency to which the respondent belongs. Thus, I could compare the teaching/goal indicators of effectiveness across members of different constituencies. This was done to address the study question of whether members of different constituencies who have similar contents of schemas evaluate effectiveness on similar specific criteria.
CHAPTER V

RESULTS

Testing the first hypothesis

To test the hypothesis, the Kruskal-Wallis and Friedman et al. tests were performed on the frequencies associated with the domains of activities reflected in the respondents' statements. To organize the presentation of the outcomes of these tests, they will be grouped in two subsections. In the first subsection, outcomes of the Friedman et al. test on differences between frequencies of domains reported for each formal constituency are reported. At the end of that subsection, the conclusions of these tests are compared for the four groups of faculty, staff, business recruiters, and OSU students.

The second subsection reports the outcomes of the Kruskal-Wallis test on differences between the groups on selected domains.

After these two subsections, where the outcomes of these tests are presented, it will be assessed whether the hypothesis was supported by the data.

Friedman et al. tests

Table 1 shows the frequencies of domains reported for faculty members, the null hypothesis tested, and the
Table 1: Friedman et al. test of the differences between reported frequencies of domains by faculty members

<table>
<thead>
<tr>
<th>Subject</th>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
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<td>(D1)</td>
<td>(D2)</td>
<td>(D3)</td>
<td>(D4)</td>
<td>(D5)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
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<td>7</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Ho: D1 = D2 = D3 = D4 = D5

Computed test statistic = 26.34

Critical test statistic = 9.49 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

D1 - D2 = 23*  D1 - D3 = 17  D1 - D4 = 24.5*
D1 - D5 = 5.5  D2 - D3 = 6   D2 - D4 = 1.5
D2 - D5 = 1.5  D3 - D4 = 7.5  D3 - D5 = 11.5
D4 - D5 = 19*

Critical test statistic = 19 , alpha = .037
statistical conclusion of the test. Each entry in the table represents the frequency scored by the respective respondent, so, for instance, the first respondent reflected on teaching 6 times, on research 5 times, and none on counseling, placement, or social activities. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different domains. Therefore, the bottom part of the table reports multiple comparisons to find out which pairs of the domains were significantly different. Comparisons followed by an asterix were significant at the reported alpha level. It turns out that differences between teaching and counseling, teaching and social, and research and social activities were significant, with the domain mentioned first scoring significantly higher than the latter one.

Table 2 shows the frequencies of domains reported for staff members, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different domains. The bottom part of the table reports multiple comparisons to find out which pairs of the domains were significantly different. It turns out that differences between teaching and placement, and teaching and social were significant, with the domain
Table 2: Friedman et al. test of the differences between reported frequencies of domains by staff members

<table>
<thead>
<tr>
<th>Subject</th>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D1)</td>
<td>(D2)</td>
<td>(D3)</td>
<td>(D4)</td>
<td>(D5)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8</td>
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<td>1</td>
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<td>8</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Ho: D1 = D2 = D3 = D4 = D5

Computed test statistic = 18.15

Critical test statistic = 9.49 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

D1 - D2 = 14.5  D1 - D3 = 19.5*  D1 - D4 = 22*
D1 - D5 = 14  D2 - D3 = 5  D2 - D4 = 7.5
D2 - D5 = 0.5  D3 - D4 = 2.5  D3 - D5 = 5.5
D4 - D5 = 8

Critical test statistic = 18 , alpha = .036
mentioned first scoring significantly higher than the latter one.

Table 3 shows the frequencies of domains reported for business recruiters, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different domains. The bottom part of the table reports multiple comparisons to find out which pairs of the domains were significantly different. It turns out that differences between teaching and social, and teaching and research were significant, with the domain mentioned first scoring significantly higher than the latter one.

Table 4 shows the frequencies of domains reported for students, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different domains. The bottom part of the table reports multiple comparisons to find out which pairs of the domains were significantly different. It turns out that differences between teaching and social, and teaching and research were significant, with the domain mentioned first scoring significantly higher than the latter one.
Table 3: Friedman et al. test of the differences between reported frequencies of domains by business recruiters

<table>
<thead>
<tr>
<th>Subject</th>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(D1)</td>
<td>(D2)</td>
<td>(D3)</td>
<td>(D4)</td>
<td>(D5)</td>
</tr>
<tr>
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<td>9</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

H₀: D₁ = D₂ = D₃ = D₄ = D₅

Computed test statistic = 18.93

Critical test statistic = 9.49 , alpha = .05

Reject H₀

Multiple comparisons

Computed test statistics:

D₁ - D₂ = 17  D₁ - D₃ = 6  D₁ - D₄ = 21*
D₁ - D₅ = 21*  D₂ - D₃ = 11  D₂ - D₄ = 4
D₂ - D₅ = 4  D₃ - D₄ = 15  D₃ - D₅ = 15
D₄ - D₅ = 0

Critical test statistic = 19 , alpha = .037
**Table 4: Friedman et al. test of the differences between reported frequencies of domains by students/OSU**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D1)</td>
<td>(D2)</td>
<td>(D3)</td>
<td>(D4)</td>
<td>(D5)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
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<tr>
<td>11</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Ho: D1 = D2 = D3 = D4 = D5

Computed test statistic = 25.98

Critical test statistic = 9.49 , alpha = .05

Reject Ho

**Multiple comparisons**

Computed test statistics:

- D1 - D2 = 15
- D1 - D3 = 19.5
- D1 - D4 = 30*
- D1 - D5 = 28*
- D2 - D3 = 4.5
- D2 - D4 = 15
- D2 - D5 = 13
- D3 - D4 = 10.5
- D3 - D5 = 8.5
- D4 - D5 = 2

Critical test statistic = 21 , alpha = .038
Collective conclusion of the Friedman et al. tests

The statistical conclusions of these four runs of the Friedman et al. tests fail to support the first hypothesis. That is, the hypothesis states that members of the different formal constituencies emphasize different domains of activities. As explained in the method chapter, for this part of the hypothesis to be supported, the Friedman et al. tests would have had to reveal different patterns of emphasis between the different formal constituencies. As seen in the outcomes of the runs though, this did not turn out to be the case. All four groups displayed the same pattern of emphasis on domains. For all of them, there were significant differences between the frequencies scored for the five domains. And for all the four groups, it was teaching that was by far the most emphasized domain; the multiple comparisons showed it to be the only domain that was significantly higher than other domains. The collective conclusion of the tests then is that there is no difference in the pattern of emphasis on the five domains between the four formal constituencies. The only exception to this general conclusion is that multiple comparisons performed on the frequencies scored by faculty members showed that, for them, research was, like teaching, highly emphasized; showing no significant difference between teaching and research while showing a significant difference between research and another domain (social activities).
Kruskal-Wallis tests

These tests examine whether there are any differences between groups in the emphasis they put on any single domain. Domains other than teaching were associated with a lot of missing values (respondents who did not reflect that domain for even a single time in their responses), signaling a common lack of emphasis on these domains. These missing values make it inappropriate to run the Kruskal/Wallis tests on domains other than teaching. [This was not the case with the Friedman et al. tests where these zeros resulted usually in two, or three, way row ties that could be solved. With each row consisting of five frequencies, a two or three way tie still leaves enough observations per row to run the test].

Table 5 shows the frequencies reported for the four groups on the domain of teaching, the null hypothesis tested, and the statistical conclusion of the test. There are two entries in each cell of the table; the number of times teaching was reflected in the responses of the participant, and (following the slash) the total number of times in which any of the four domains was emphasized. So, the first faculty member emphasized teaching six times out of a total of eleven statements in which he mentioned any of the models. Dividing the first number in every cell by the second provides the raw data needed to run the test. That is, the logic of the test requires comparing, across
Table 5: Kruskal/Wallis test of the differences between the four groups on reported frequencies of teaching

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Business</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G1)</td>
<td>(G2)</td>
<td>(G3)</td>
<td>(G4)</td>
</tr>
<tr>
<td>6/11</td>
<td>8/14</td>
<td>9/11</td>
<td>10/15</td>
</tr>
<tr>
<td>2/6</td>
<td>5/10</td>
<td>3/9</td>
<td>9/10</td>
</tr>
<tr>
<td>5/6</td>
<td>6/11</td>
<td>1/7</td>
<td>7/12</td>
</tr>
<tr>
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<td>6/7</td>
</tr>
<tr>
<td>2/3</td>
<td>1/3</td>
<td>2/3</td>
<td>7/8</td>
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<td>7/9</td>
<td>2/3</td>
</tr>
<tr>
<td>5/5</td>
<td>2/3</td>
<td>3/7</td>
<td>15/15</td>
</tr>
<tr>
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<td>4/7</td>
<td>6/14</td>
<td>3/16</td>
</tr>
<tr>
<td>7/13</td>
<td>12/12</td>
<td>2/3</td>
<td>2/6</td>
</tr>
</tbody>
</table>

Ho: G1= G2= G3= G4

Computed test statistic = 2.04

Critical test statistic = 7.81

, alpha = .05

Do not reject Ho
groups, the ratio of times teaching was reflected in the responses of participants to the total number of times he mentioned any domain. By using that ratio, the test insures that differences in the total number of times any domain was emphasized, due for instance to differences in the ability to cognitively differentiate between objects (organizations in this study), do not interfere with the test of differences of emphasis on teaching by different respondents.

The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis of teaching. No one group emerged as emphasizing teaching significantly more or significantly less that other groups. In the language of inferential statistics, the test concludes that members of the four groups can be considered members of the same population in terms of their emphasis on teaching.

The test has therefore confirmed the conclusion of the Friedman tests in refuting the first hypothesis of the study.

Testing the second hypothesis

To test the hypothesis, the Kruskal-Wallis and Friedman et al. tests were performed on the frequencies associated with the models of performance reflected in the respondents' statements. To organize the presentation of the outcomes of these tests, they will be grouped in two
subsections similar to the ones presented when reporting the outcomes of tests of the first hypothesis. In the first of these subsections, outcomes of the Friedman et al. test on differences between frequencies of models reported for each formal constituency are reported. These tests examine for each group whether there are any significant differences between frequencies associated with the three models of goal, internal processes, and system resources. At the end of that subsection, the conclusions of these tests are compared for the four groups of faculty, staff, business recruiters, and OSU students.

The second subsection reports the outcomes of the Kruskal-Wallis test on differences between the groups in the three models. These tests examine whether significant differences are observed between the four groups in terms of the frequencies reported for a particular model. After these two subsections will have presented the outcomes of these tests, it will be assessed whether the hypothesis was supported by the data.

**Friedman et al. tests**

Table 6 shows the frequencies of models reported for faculty members, the null hypothesis tested, and the statistical conclusion of the test. Each entry in the table represents the frequency scored by the respective respondent, so, for instance, the first respondent
Table 6: Friedman et al. test of the differences between reported frequencies of models by faculty

<table>
<thead>
<tr>
<th>Subject Goals</th>
<th>Syst. Res. processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M1)</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
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<td>9</td>
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<td>8</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
</tr>
</tbody>
</table>

Ho: M1 = M2 = M3

Computed test statistic = 1.8

Critical test statistic = 6 to 6.2

alpha is close to .05

Do not reject Ho
reflected a goal model 4 times, system resources 2 times, and internal processes 4 times. The statistical conclusion of the test was not to reject the null hypothesis that there are no differences between the frequencies scored for the different models.

Table 7 shows the frequencies of models reported for staff members, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different models. The bottom part of the table reports multiple comparisons to find out which pairs of the models were significantly different. It turns out that differences between internal processes and goals, internal processes and system resources were significant, with the model mentioned first scoring significantly higher than the latter one.

Table 8 shows the frequencies of models reported for business recruiters, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different models. The bottom part of the table reports multiple comparisons to find out which pairs of the models were significantly different. It turns out that differences between internal processes and goals,
Table 7: Friedman et al. test of the differences between reported frequencies of models by staff

<table>
<thead>
<tr>
<th>Subject</th>
<th>Goals</th>
<th>Syst.Res.</th>
<th>processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M1)</td>
<td>(M2)</td>
<td>(M3)</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
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</tr>
<tr>
<td>8</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Ho: M1 = M2 = M3

Computed test statistic = 11.29

Critical test statistic is about 6.25
alpha is close to .05

Reject Ho

Multiple comparisons

M1 - M2 = 2.5  M1 - M3 = 12.5*  M2 - M3 = 10*

Critical test statistic = 10
Alpha = .039
Table 8: Friedman et al. test of the differences between reported frequencies of models by business recruiters

<table>
<thead>
<tr>
<th>Subject Goals</th>
<th>Syst. Res. processes</th>
<th>(M1)</th>
<th>(M2)</th>
<th>(M3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>8</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>2</td>
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</tr>
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<td>4</td>
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<tr>
<td>9</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Ho: M1 = M2 = M3

Computed test statistic = 14.11

Critical test statistic = 6 to 6.2
alpha is close to .05

Reject Ho

Multiple comparisons

M1 - M2 = 10*  
M1 - M3 = 15.5*  
M2 - M3 = 5.5

Critical test statistic = 10
Alpha = .048
system resources and goals were significant, with the model mentioned first scoring significantly higher than the latter ones.

Table 9 shows the frequencies of models reported for students, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different models. The bottom part of the table reports multiple comparisons to find out which pairs of the models were significantly different. It turns out that differences between internal processes and goals, internal processes and system resources were significant, with the model mentioned first scoring significantly higher than the latter one.

Collective conclusion of the Friedman et al. tests

The statistical conclusions of these four runs of the Friedman et al. tests indicate support for the second hypothesis. That is, the hypothesis states that models of performance emphasized in the schemas of organizational performance held by members of a formal constituency are not the same, and hence, models emphasized in the schemas of members of a formal constituency are not different than those of members of other formal constituencies. As explained in the method chapter, for this hypothesis to be disconfirmed, the Friedman et al. tests would have had to
Table 9: Friedman et al. test of the differences between reported frequencies of models by students

<table>
<thead>
<tr>
<th>Subject</th>
<th>Goals</th>
<th>Syst.Res.</th>
<th>processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M1)</td>
<td>(M2)</td>
<td>(M3)</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
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<td>0</td>
<td>1</td>
<td>14</td>
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<td>5</td>
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</tr>
<tr>
<td>9</td>
<td>1</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Ho: M1 = M2 = M3

Computed test statistic = 14.3

Critical test statistic = 5.6 to 6.5

alpha is close to .05

Reject Ho

Multiple comparisons

M1 - M2 = 5.5  M1 - M3 = 17*
M2 - M3 = 11.5*

Critical test statistic = 11

Alpha = .049
reveal different patterns of emphasis between the different formal constituencies. As seen in the outcomes of the runs, this did not turn out to be the case. For three of the four groups, there were significant differences between the frequencies scored for the three models. And for these three groups, it was internal processes that was by far the most emphasized model; the multiple comparisons showed it to be the only model that was consistently and significantly higher than other models. As for the fourth group, faculty members, there was no model emphasized at all; no significant differences were found between the frequencies associated with the three models. In a way, that group provides the stronger support of the hypothesis. Accepting the null hypothesis of no differences indicates that different faculty members emphasized different models; that taken as a group, they did not share a model they emphasized more than other models. There is therefore no basis for thinking of them as a distinct group in that regard. The only exception to this support of the hypothesis is that business recruiters emphasized system resources as well as internal processes, a result expected if the second hypothesis is disconfirmed.

Kruskal-Wallis tests

These tests compliment the Friedman et al. tests by examining whether there are any differences between groups in the emphasis they put on any single model.
Table 10 shows the frequencies reported for the four groups on the goal model, the null hypothesis tested, and the statistical conclusion of the test. There are two entries in each cell of the table; the number of times the goal model was reflected in the responses of the participant, and (following the slash) the total number of times he reflected any of the three models. So, the first faculty member emphasized the goal model four times out of a total of ten in which he emphasized any of the three models.

The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis of the goal model. No one group emerged as emphasizing the goal model significantly more or significantly less than other groups. In the language of inferential statistics, the test concludes that members of the four groups can be considered members of the same population in terms of emphasis on the goal model.

Table 11 shows the frequencies reported for the four groups on the system resources model, the null hypothesis tested, and the statistical conclusion of the test. The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis of the system resources model.

Table 12 shows the frequencies reported for the four groups on the internal processes model, the null hypothesis
Table 10: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the goal model

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Business</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G1)</td>
<td>(G2)</td>
<td>(G3)</td>
<td>(G4)</td>
</tr>
<tr>
<td>4/10</td>
<td>1/11</td>
<td>2/22</td>
<td>0/16</td>
</tr>
<tr>
<td>9/15</td>
<td>1/9</td>
<td>2/13</td>
<td>1/13</td>
</tr>
<tr>
<td>4/15</td>
<td>1/8</td>
<td>2/15</td>
<td>4/22</td>
</tr>
<tr>
<td>1/7</td>
<td>2/10</td>
<td>1/11</td>
<td>0/15</td>
</tr>
<tr>
<td>6/36</td>
<td>3/10</td>
<td>3/10</td>
<td>1/6</td>
</tr>
<tr>
<td>2/19</td>
<td>1/17</td>
<td>0/13</td>
<td>3/42</td>
</tr>
<tr>
<td>2/12</td>
<td>1/11</td>
<td>4/16</td>
<td>2/19</td>
</tr>
<tr>
<td>2/15</td>
<td></td>
<td>2/15</td>
<td>1/7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0/13</td>
</tr>
</tbody>
</table>

Ho: G1= G2= G3= G4

Computed test statistic = 6.05

Critical test statistic = 7.81

alpha = .05

Do not reject Ho
Table 11: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the system resources model

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Business</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G1)</td>
<td>(G2)</td>
<td>(G3)</td>
<td>(G4)</td>
</tr>
<tr>
<td>2/10</td>
<td>3/11</td>
<td>8/22</td>
<td>5/16</td>
</tr>
<tr>
<td>3/15</td>
<td>2/9</td>
<td>3/13</td>
<td>1/13</td>
</tr>
<tr>
<td>1/15</td>
<td>3/8</td>
<td>5/15</td>
<td>2/22</td>
</tr>
<tr>
<td>6/7</td>
<td>0/10</td>
<td>4/11</td>
<td>1/15</td>
</tr>
<tr>
<td>14/36</td>
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<td>3/10</td>
<td>3/6</td>
</tr>
<tr>
<td>4/11</td>
<td>4/20</td>
<td>4/15</td>
<td>3/15</td>
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<tr>
<td>2/19</td>
<td>8/17</td>
<td>7/13</td>
<td>5/42</td>
</tr>
<tr>
<td>4/12</td>
<td>3/11</td>
<td>5/16</td>
<td>5/19</td>
</tr>
<tr>
<td>2/15</td>
<td>8/15</td>
<td>0/7</td>
<td>3/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/13</td>
</tr>
</tbody>
</table>

Ho: G1 = G2 = G3 = G4

Computed test statistic = 4.23

Critical test statistic = 7.81

alpha = .05

Do not reject Ho
Table 12: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the internal processes model

<table>
<thead>
<tr>
<th>Faculty (G1)</th>
<th>Staff (G2)</th>
<th>Business (G3)</th>
<th>Students (G4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/10</td>
<td>7/11</td>
<td>12/22</td>
<td>11/16</td>
</tr>
<tr>
<td>3/15</td>
<td>6/9</td>
<td>8/13</td>
<td>11/13</td>
</tr>
<tr>
<td>10/15</td>
<td>4/8</td>
<td>8/15</td>
<td>16/22</td>
</tr>
<tr>
<td>0/7</td>
<td>8/10</td>
<td>6/11</td>
<td>14/15</td>
</tr>
<tr>
<td>16/36</td>
<td>7/10</td>
<td>4/10</td>
<td>2/6</td>
</tr>
<tr>
<td>3/11</td>
<td>10/20</td>
<td>8/15</td>
<td>8/15</td>
</tr>
<tr>
<td>15/19</td>
<td>8/17</td>
<td>6/13</td>
<td>34/42</td>
</tr>
<tr>
<td>6/12</td>
<td>7/11</td>
<td>7/16</td>
<td>12/19</td>
</tr>
<tr>
<td>11/15</td>
<td>5/15</td>
<td>6/7</td>
<td>3/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7/13</td>
</tr>
</tbody>
</table>

Ho: G1= G2= G3= G4

Computed test statistic = 7.34

Critical test statistic = 7.81

alpha = .05

Do not reject Ho
tested, and the statistical conclusion of the test. The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis of the internal processes model. The tests have therefore confirmed the conclusion of the Friedman et al. tests in supporting the second hypothesis of the study.

Testing the third hypothesis

To test the hypothesis, the Kruskal-Wallis and Friedman et al. tests were performed on the frequencies associated with the individuals reflected in the respondents' statements as most instrumental in bringing about effective performance. To organize the presentation of the outcomes of these tests, they will be grouped in two subsections similar to the ones presented when reporting the outcomes of tests of the first and second hypothesis. In the first of these subsections, outcomes of the Friedman et al. test on differences between frequencies of the different categories of individuals reported for each formal constituency are reported. These tests examine for each group whether there are any significant differences between frequencies associated with the four categories of professors and other instructors, administrators, support staff, and students. At the end of that subsection, the conclusions of these tests are compared for the four formal constituencies of faculty, staff, business recruiters, and
OSU students.

The second subsection reports the outcomes of the Kruskal-Wallis test on differences between the four constituencies in terms of their emphasis of the four categories of individuals. These tests examine whether significant differences are observed between the four formal constituencies in terms of the frequencies reported for a particular category of instrumental individuals. After these two subsections will have presented the outcomes of these tests, it will be assessed whether the hypothesis was supported by the data.

**Friedman et al. tests**

Table 13 shows the frequencies of categories of instrumental individuals reported for faculty members, the null hypothesis tested, and the statistical conclusion of the test. Each entry in the table represents the frequency scored by the respective respondent, so, for instance, the first respondent emphasized professors and other instructors 6 times, administrators 3 times, support staff 0 times, and students 0 times. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different categories of individuals. The bottom part of the table reports multiple comparisons to find out which pairs of categories of individuals were significantly different. It turns out that differences between professors and staff,
Table 13: Friedman et al. test of the differences between reported frequencies of instrumental individuals by faculty

<table>
<thead>
<tr>
<th>Subject</th>
<th>Profess.</th>
<th>administr.</th>
<th>staff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(I1)</td>
<td>(I2)</td>
<td>(I3)</td>
<td>(I4)</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>13</td>
<td>1</td>
<td>0</td>
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<tr>
<td>3</td>
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<tr>
<td>7</td>
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<tr>
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</tr>
<tr>
<td>9</td>
<td>7</td>
<td>11</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Ho: I1 = I2 = I3 = I4

Computed test statistic = 22.13

Critical test statistic = 7.81 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

\[ I_1 - I_2 = 3.5 \]
\[ I_1 - I_3 = 15^* \]
\[ I_1 - I_4 = 16.5^* \]
\[ I_2 - I_3 = 18.5^* \]
\[ I_2 - I_4 = 20^* \]
\[ I_3 - I_4 = 1.5 \]

Critical test statistic = 15 , alpha = .032
professors and students, administrators and staff, and administrators and students were significant, with the category mentioned first scoring significantly higher than the latter one.

Table 14 shows the frequencies of categories of instrumental individuals reported for staff members, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different categories of individuals. The bottom part of the table reports multiple comparisons to find out which pairs of categories of individuals were significantly different. It turns out that differences between administrators and students were significant, with the category mentioned first scoring significantly higher than the latter one.
Table 14: Friedman et al. test of the differences between reported frequencies of instrumental individuals by staff

<table>
<thead>
<tr>
<th>Subject</th>
<th>Profess,</th>
<th>administr.</th>
<th>staff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(I1)</td>
<td>(I2)</td>
<td>(I3)</td>
<td>(I4)</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>6</td>
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<td>1</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>11</td>
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<td>0</td>
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<tr>
<td>4</td>
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<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
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<td>3</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
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<tr>
<td>8</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Ho: $I_1 = I_2 = I_3 = I_4$

Computed test statistic = 12.38

Critical test statistic = 7.81 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

$I_1 - I_2 = 3$  $I_1 - I_3 = 8$  $I_1 - I_4 = 13$
$I_2 - I_3 = 11$  $I_2 - I_4 = 16^*$
$I_3 - I_4 = 5$

Critical test statistic = 14 , alpha = .034
Table 15 shows the frequencies of categories of instrumental individuals reported for business recruiters, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different categories of individuals. The bottom part of the table reports multiple comparisons to find out which pairs of categories of individuals were significantly different. It turns out that differences between administrators and staff, and administrators and students were significant, with the category mentioned first scoring significantly higher than the latter one.

Table 16 shows the frequencies of categories of instrumental individuals reported for students, the null hypothesis tested, and the statistical conclusion of the test. The statistical conclusion of the test was to reject the null hypothesis that there are no differences between the frequencies scored for the different categories of individuals. The bottom part of the table reports multiple comparisons to find out which pairs of categories of individuals were significantly different. It turns out that differences between administrators and students were significant, with the category mentioned first scoring significantly higher than the latter one.
Table 15: Friedman et al. test of the differences between reported frequencies of instrumental individuals by business recruiters

<table>
<thead>
<tr>
<th>Subject</th>
<th>Profess.</th>
<th>administr.</th>
<th>staff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(I1)</td>
<td>(I2)</td>
<td>(I3)</td>
<td>(I4)</td>
</tr>
<tr>
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<td>0</td>
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<td>7</td>
<td>7</td>
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<tr>
<td>4</td>
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</tr>
<tr>
<td>9</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Ho: I1 = I2 = I3 = I4  
Computed test statistic = 16.8  
Critical test statistic = 7.81 , alpha = .05  
Reject Ho

Multiple comparisons

Computed test statistics:  
I1 - I2 = 10  
I1 - I3 = 4.5  
I1 - I4 = 11.5  
I2 - I3 = 14.5*  
I2 - I4 = 21.5*  
I3 - I4 = 7  
Critical test statistic = 15 , alpha = .032
Table 16: Friedman et al. test of the differences between reported frequencies of instrumental individuals by students

<table>
<thead>
<tr>
<th>Subject</th>
<th>Profess.</th>
<th>adminstr.</th>
<th>staff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(I1)</td>
<td>(I2)</td>
<td>(I3)</td>
<td>(I4)</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
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<td>3</td>
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</tr>
<tr>
<td>2</td>
<td>9</td>
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<td>1</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
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<td>0</td>
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<tr>
<td>6</td>
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<td>1</td>
<td>0</td>
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<td>7</td>
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<td>2</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Ho: $I_1 = I_2 = I_3 = I_4$

Computed test statistic = 12.25

Critical test statistic = 7.81, alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

$I_1 - I_2 = 3$  $I_1 - I_3 = 9.5$  $I_1 - I_4 = 15.5$

$I_2 - I_3 = 12.5$  $I_2 - I_4 = 18.5*$

$I_3 - I_4 = 6$

Critical test statistic = 16, alpha = .041
Collective conclusion of the Friedman et al. tests

The statistical conclusions of these four runs of the Friedman et al. tests indicate support for the third hypothesis. That is, the hypothesis states that individuals emphasized as most instrumental in bringing about effective performance in schemas of organizational performance held by members of a formal constituency are not the same, and hence, individuals emphasized in the schemas of members of a formal constituency are not different than those of members of other formal constituencies. As explained in the method chapter, for this hypothesis to be disconfirmed, the Friedman et al. tests would have had to reveal different patterns of emphasis between the different formal constituencies. As seen in the outcomes of the runs, this did not turn out to be the case. For all four groups, there were significant differences between the frequencies scored for the four categories of individuals. And for all four groups, one category of individuals was emphasized significantly more than other categories as instrumental in effective performance; administrators. The one exception to this common pattern is that faculty members also emphasized professors and other instructors, in addition to administrators, significantly more than other categories of individuals.

Kruskal-Wallis tests

These tests complement the Friedman et al. tests by
examining whether there are any differences between groups in the emphasis they put on any single category of individuals.

Table 17 shows the frequencies reported for the four groups on the category of professors and other instructors, the null hypothesis tested, and the statistical conclusion of the test. There are two entries in each cell of the table; the number of times professors were emphasized in the responses of the participant, and (following the slash) the total number of times he emphasized any of the four categories. So, the first faculty member emphasized the professors six times out of a total of nine in which he emphasized any of the four categories.

The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis on professors. No one group emerged as emphasizing professors significantly more or significantly less that other groups. In the language of inferential statistics, the test concludes that members of the four groups can be considered members of the same population in terms of emphasis on professors.

Table 18 shows the frequencies reported for the four groups on the category of administrators, the null hypothesis tested, and the statistical conclusion of the test. The conclusion of the test was not to reject the null hypothesis that there are no differences between the four
Table 17: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the category of professors and other instructors

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Business</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G1)</td>
<td>(G2)</td>
<td>(G3)</td>
<td>(G4)</td>
</tr>
<tr>
<td>6/9</td>
<td>7/15</td>
<td>7/25</td>
<td>7/17</td>
</tr>
<tr>
<td>3/17</td>
<td>6/12</td>
<td>4/15</td>
<td>9/12</td>
</tr>
<tr>
<td>5/11</td>
<td>3/6</td>
<td>1/11</td>
<td>7/19</td>
</tr>
<tr>
<td>3/24</td>
<td>0/8</td>
<td>4/14</td>
<td>2/9</td>
</tr>
<tr>
<td>6/12</td>
<td>5/20</td>
<td>9/19</td>
<td>3/12</td>
</tr>
<tr>
<td>6/19</td>
<td>3/15</td>
<td>5/18</td>
<td>26/48</td>
</tr>
<tr>
<td>1/9</td>
<td>4/13</td>
<td>5/20</td>
<td>4/25</td>
</tr>
<tr>
<td>7/20</td>
<td>11/17</td>
<td>1/8</td>
<td>4/8</td>
</tr>
</tbody>
</table>

Ho: G1= G2= G3= G4

Computed test statistic = .2956

Critical test statistic = 7.81

alpha = .05

Do not reject Ho
Table 18: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the category of administrators

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Business</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G1)</td>
<td>(G2)</td>
<td>(G3)</td>
<td>(G4)</td>
</tr>
<tr>
<td>13/17</td>
<td>1/12</td>
<td>6/15</td>
<td>0/12</td>
</tr>
<tr>
<td>10/21</td>
<td>11/25</td>
<td>7/18</td>
<td>6/13</td>
</tr>
<tr>
<td>3/11</td>
<td>2/6</td>
<td>5/11</td>
<td>9/19</td>
</tr>
<tr>
<td>21/24</td>
<td>4/8</td>
<td>7/14</td>
<td>6/9</td>
</tr>
<tr>
<td>3/12</td>
<td>14/20</td>
<td>9/19</td>
<td>8/12</td>
</tr>
<tr>
<td>13/19</td>
<td>8/15</td>
<td>8/18</td>
<td>13/48</td>
</tr>
<tr>
<td>7/9</td>
<td>6/13</td>
<td>8/20</td>
<td>11/25</td>
</tr>
<tr>
<td>11/20</td>
<td>4/17</td>
<td>4/8</td>
<td>1/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4/10</td>
</tr>
</tbody>
</table>

$H_0$: G1 = G2 = G3 = G4

Computed test statistic = 3.04

Critical test statistic = 7.81

$\alpha = .05$

Do not reject $H_0$
groups in their emphasis of administrators.

Table 19 shows the frequencies reported for the four groups on the category of staff, the null hypothesis tested, and the statistical conclusion of the test. The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis of staff.

Table 20 shows the frequencies reported for the four groups on the category of students, the null hypothesis tested, and the statistical conclusion of the test. The conclusion of the test was not to reject the null hypothesis that there are no differences between the four groups in their emphasis of students.

The tests have therefore confirmed the conclusion of the Friedman et al. tests in supporting the third hypothesis of the study.
Table 19: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the category of staff

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Business</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G1)</td>
<td>(G2)</td>
<td>(G3)</td>
<td>(G4)</td>
</tr>
<tr>
<td>0/9</td>
<td>2/15</td>
<td>4/25</td>
<td>3/17</td>
</tr>
<tr>
<td>1/17</td>
<td>4/12</td>
<td>5/15</td>
<td>2/12</td>
</tr>
<tr>
<td>2/21</td>
<td>5/25</td>
<td>7/18</td>
<td>2/13</td>
</tr>
<tr>
<td>1/11</td>
<td>0/6</td>
<td>4/11</td>
<td>1/19</td>
</tr>
<tr>
<td>0/24</td>
<td>3/8</td>
<td>1/14</td>
<td>1/9</td>
</tr>
<tr>
<td>2/12</td>
<td>1/20</td>
<td>0/19</td>
<td>1/12</td>
</tr>
<tr>
<td>0/19</td>
<td>3/15</td>
<td>3/18</td>
<td>2/48</td>
</tr>
<tr>
<td>1/9</td>
<td>1/13</td>
<td>6/20</td>
<td>8/25</td>
</tr>
<tr>
<td>1/20</td>
<td>0/17</td>
<td>2/8</td>
<td>1/8</td>
</tr>
</tbody>
</table>

Ho: G1 = G2 = G3 = G4

Computed test statistic = 6.13

Critical test statistic = 7.81

alpha = .05

Do not reject Ho
Table 20: Kruskal/Wallis test of the differences between the four groups on reported frequencies of the category of students

<table>
<thead>
<tr>
<th>Faculty (G1)</th>
<th>Staff (G2)</th>
<th>Business (G3)</th>
<th>Students (G4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/9</td>
<td>0/15</td>
<td>2/25</td>
<td>3/17</td>
</tr>
<tr>
<td>0/17</td>
<td>1/12</td>
<td>0/15</td>
<td>1/12</td>
</tr>
<tr>
<td>4/21</td>
<td>0/25</td>
<td>0/18</td>
<td>0/13</td>
</tr>
<tr>
<td>2/11</td>
<td>1/6</td>
<td>1/11</td>
<td>2/19</td>
</tr>
<tr>
<td>0/24</td>
<td>1/8</td>
<td>2/14</td>
<td>0/9</td>
</tr>
<tr>
<td>1/12</td>
<td>0/20</td>
<td>1/19</td>
<td>0/12</td>
</tr>
<tr>
<td>0/19</td>
<td>1/15</td>
<td>2/18</td>
<td>7/48</td>
</tr>
<tr>
<td>0/9</td>
<td>2/13</td>
<td>1/20</td>
<td>2/25</td>
</tr>
<tr>
<td>1/20</td>
<td></td>
<td>2/17</td>
<td>1/8</td>
</tr>
</tbody>
</table>

Ho: G1= G2= G3= G4

Computed test statistic = .92

Critical test statistic = 7.81

alpha = .05

Do not reject Ho
Examining the three dimensions of schemas of organizational performance of all the respondents as one group

The tests reported so far have indicated that membership in different formal constituencies is not associated with schematic differences in emphases on domains of activities, models of effectiveness, or individuals instrumental in bringing about effective performance. (The few exceptions to this general conclusion are discussed in the next chapter). Therefore it is not justified to group respondents of the study in different categories based on formal relationship to the organization when examining patterns of contents of the schemas of organizational performance they hold. They are more appropriately seen as members of one organization than as members of different constituencies. Hence, I felt it was appropriate at this point to aggregate all respondents in one group and explore patterns of the contents of their schemas of organizational performance.

The Friedman et al. tests that were performed to explore such patterns are reported in tables 21 through 23. Table 21 reports the sums of the ranks of the frequencies associated with the five domains of teaching, counseling, placement, social, and research activities reported for all respondents taken as one group. The entries of that table simply represent a collapse of all such ranks used earlier to perform the Friedman et al. tests on members of the
Table 21: Friedman et al. test of the differences between reported frequencies of domains by all respondents

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>(R1)</td>
<td>(R2)</td>
<td>(R3)</td>
<td>(R4)</td>
<td>(R5)</td>
</tr>
<tr>
<td>170.5</td>
<td>101</td>
<td>108.5</td>
<td>73</td>
<td>102</td>
</tr>
</tbody>
</table>

Ho: R1= R2= R3= R4= R5

Computed test statistic = 68.84

Critical test statistic = 9.49 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

R1 - R2 = 69.5*  R1 - R3 = 62*  R1 - R4 = 97.5*
R1 - R5 = 68.5*  R2 - R3 = 7.5   R2 - R4 = 28
R2 - R5 = 1     R3 - R4 = 35.5   R3 - R5 = 6.5
R4 - R5 = 29

Critical test statistic = 36.8, alpha = .037
individual constituencies. The table shows the null hypothesis tested, and the conclusion of the test. The null hypothesis that there are no differences in the emphasis respondents place on the five domains was rejected. Multiple comparisons showed teaching to be the domain emphasized significantly more than every other domain. No other significant differences were observed.

Table 22 reports the sums of the ranks of the frequencies associated with the goal, system resources, and internal processes' models. The table shows the null hypothesis tested, and the conclusion of the test. The null hypothesis that there are no differences in the emphasis respondents place on the three models was rejected. Multiple comparisons showed internal processes to be the model emphasized significantly more than every other model. No other significant differences were observed.

Table 23 reports the sums of the ranks of the frequencies associated with the categories of professors and other instructors, administrators, staff, and students. The table shows the null hypothesis tested, and the conclusion of the test. The null hypothesis that there are no differences in the emphasis respondents place on the four categories was rejected. Multiple comparisons showed professors and administrators to be the two categories emphasized significantly more than staff and students.
Table 22: Friedman et al. test of the differences between reported frequencies of models by faculty members

<table>
<thead>
<tr>
<th>Goal</th>
<th>Syst. Res.</th>
<th>Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(R1)</td>
<td>(R2)</td>
<td>(R3)</td>
</tr>
<tr>
<td>52</td>
<td>69</td>
<td>101</td>
</tr>
</tbody>
</table>

Ho: $R_1 = R_2 = R_3$

Computed test statistic = 35.62

Critical test statistic = 5.99, alpha = .05

Reject Ho

*Multiple comparisons*

Computed test statistics:

$R_1 - R_2 = 17$  $R_1 - R_3 = 49^*$

$R_2 - R_3 = 32^*$

Critical test statistic = 20.15
Table 23: Friedman et al. test of the differences between reported frequencies of categories of instrumental individuals

<table>
<thead>
<tr>
<th>Professors</th>
<th>Administrators</th>
<th>Staff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>(R1)</td>
<td>(R2)</td>
<td>(R3)</td>
<td>(R4)</td>
</tr>
<tr>
<td>111</td>
<td>130.5</td>
<td>74</td>
<td>54.5</td>
</tr>
</tbody>
</table>

Ho: R1 = R2 = R3 = R4

Computed test statistic = 60.05

Critical test statistic = 7.81

Reject Ho

Multiple comparisons

Computed test statistics:

R1 - R2 = 19.5  R1 - R3 = 37*  R1 - R4 = 56.5*
R2 - R3 = 56.5* R2 - R4 = 76*
R3 - R4 = 19.5

Critical test statistic = 28.5
Qualitative analysis of indicators of effectiveness

This section reports on the examination of the specific indicators of effectiveness that stem from different combinations of domain/model of effectiveness emphasized in schemas of members of different formal constituencies. The analysis allows for an examination of whether members of different formal constituencies who hold similar schemas of organizational performance adopt similar indicators of effectiveness. Since the number of possible domain/model combinations for the different constituencies is quite large, the following subsections report the outcome of that qualitative examination for a few selected domain/model combinations. The mode of presentation will be to simply list the indicators identified in statements made by members without attempting to organize them in phrases or paragraphs. That is, they will be presented in almost the same raw form in which members stated them during the interviews. This is done to provide the reader with direct experience of indicators used by members, and to allow the reader to evaluate my qualitative analysis of these statements.

Indicators of effectiveness reflected in statements which were classified as teaching/internal processes for faculty members

Evaluation by students as being an effective teacher. some sense of equity; students feel that they face a common
set of standards, fairness. Faculty being able to decide on basic core of curriculum; yet in unique programs, students can have an input. Quality and quantity of graduate students produced; what kind of institution they go to and research they do. Interaction between faculty and students in intellectual matters. Direct value added. Education that is both specialized and cross cutting (integrating); have people who are specialized and act as generalists. Retain faculty who are good teachers, and maybe not necessarily good researchers. Emphasis on writing skills. Emphasize courses outside departments; less specialization. Departments' abilities to take a collective action to correct a faculty member's behavior (in classroom for instance). Level of mentoring activities. Reasonably small class sizes. Reward good teaching; releases from research, tenure even with less research. Mentality that can appreciate benefits of teaching to college, which is hard to quantify.

**Indicators of effectiveness reflected in statements which were classified as teaching/internal processes for staff members**

Meet needs of students. Teaching many things. Ability to change. Train a rounded personality; more than one talent. Balance between research and teaching ability of faculty. A basic general education in students' majors; enough knowledge to be trained on a job. Ability to prepare
for future careers. Not dealing with customers as statistics. Ability to respond to different students' needs; availability of faculty and staff. Reception of students; treating them well. How the place looks. and the way the work is done should be state of the art; including equipment and available rooms. Content of material taught has to be interesting. Being objective and neutral in conflicts between instructors and students. Quality of instructors, and of student grades; need for complex such measures. How good the program is; how good professors and facilities are. Adequate office hours and interaction with students. Faculty up in their fields; their reputation; ability of college to recruit outstanding faculty. Best education; our own courses and BERs. Faculty and TAs interested in what students are learning; awarded for teaching. Good instructors. Diversified courses. Flexibility in choosing majors.

*Indicators of effectiveness reflected in statements which were classified as teaching/internal processes for business recruiters*

  Professors: strong academic background and in industry exposure. Variety of curriculum. inter-major diversity. Consistency in establishing grades. Diversity in how students learn; case studies, projects, etc. help students prepare for careers; get employers to talk about their industries, narrow students' focus; students should
understand how academics translate to the business world and develop the interpersonal skills that help them excel in business. Resources available to students like computer time. Curriculum has to reflect what the college thinks is appropriate, as well as what the business needs. Prompt revisions of curricula. Honor professors in Accounting taking personal interest in honor students; how much they educate them from a personal development perspective, taking care of their shortcomings. Ability of professors to educate students who are both thinkers and outgoing, because they will have to evolve from the technical to the marketer. Cases bridge gaps with application. Professors ability to communicate with students. Efficiency in teaching; number of students per professor. Some kind of a review process to assure the quality of education is up to the standards set by the college. Ability to attract and keep high quality professors; technical and interpersonal skills are important here. Ability to teach students specific skills. How classes are handled. Availability of classes for part time students all quarters. How enthusiastic faculty and students are. Participation of students in classes. Actual hands on experiences and realistic expectations. Well rounded students; writing and math skills. Freedom of faculty in having a say about curriculum.
Indicators of effectiveness reflected in statements which were classified as teaching/internal processes for students

Knowledgeable professors, able to communicate effectively with students. Provide training that students need. Address interests of older students. Instructors knowing what students should expect when they graduate. Instructors encouraging questions; particularly those connecting more than one class. Amount of work done by students; they should do more. Instructors' knowledge, ability to understand questions of students, enthusiastic. Rules about missing classes. Limits on numbers of students per class. Teachers having designated office hours. Both teaching staff and administrators have to be good. Level of material suitable for average students. Professors open to students ideas and opinions. Are students encouraged to talk to each other. Students researching projects, finding new ideas and bringing them back to classes. Good professors and a good curriculum. Responding to demands in business environments; like giving more importance to computers. Constantly evaluate and upgrade teachers. Enough professors to teach students, and advise them on careers. Teachers bringing in everyday situations. Students liking professors. Current and updated material. Professors able to come across to students. Professors having an understanding of the material; degree alone is not enough. Professors should have been out in the real world.
Professors are able to explain and solve problems.
Professors more analytical; able to think at higher levels.
Professors and students working hard. More cooperation
between professors and students. Professors being there to
help students.

Are indicators stemming from teaching/internal processes
schemas different for members of the four formal
constituencies?

It is difficult to judge differences between groups
based on such a glossary of indicators. However, two
general observations can be made.

1. Different individuals within each group reflected
different indicators.

2. However, some consistencies could be observed. It
seems for instance that faculty and students were similar
in reflecting indicators that have to do with communication
in classrooms, cooperation between students and teachers,
fairness of evaluation, curriculum that is both specialized
and integrative, and class sizes. On the other hand,
faculty and staff were similar in reflecting indicators
that have to do with balance between teaching and research,
and the college's control over curricula. Students and
business recruiters reflected more indicators that have to
do with exposure to the business world, both in terms of
faculty's background and class activities, than members of
the other two groups.
Therefore, it seems reasonable to cautiously conclude that membership in a formal constituency is related to the kinds of indicators that stem from schemas of organizational performance held by organizational members. [This qualified conclusion is not in contradiction with the general conclusion of the three hypotheses. The conclusion of no effect of membership in constituencies on domains and models emphasized in schemas means that similar patterns of domain/model schemas are expected for members of different constituencies. (E.g., if two thirds of the faculty hold teaching/internal processes schemas, then it is to be expected that two thirds of staff members would hold similar schemas). On the other hand, the conclusion that constituency membership is related to indicators of effectiveness means that members of different constituencies who adopt similar domain/model schemas (e.g., the two thirds of each of the two groups of faculty and staff who hold teaching/internal processes schemas) will use different indicators of effectiveness].

Examining data collected by the three simpler questions

The tests reported so far have been performed on the data collected via the principal technique employed in the study: Kelly's Repertory Grid. However, as indicated in the method section, three additional questions were asked of the respondents toward the end of each interview. The first question asked the respondent to evaluate the effectiveness
of the College on a scale of one to five, and then to provide reasons for that evaluation. The second question asked the respondent to cite incidents in which he felt the organization was very effective or very ineffective. The third question asked the respondent to provide a list of factors he would use to evaluate the effectiveness of the organization if asked to do so.

The three questions were intended to examine whether questions more direct than the Grid would lead to conclusions different than those based on the Grid data, and if so, what differences in the quality of the data generated by the two approaches resulted in such different conclusions. One expectation was that the more direct questions would probably generate responses that are more specific and of shorter time span that the ones generated by the Grid.

As in turns out though, the three questions did not lead to conclusions any different from the ones generated by the Grid, and, in the judgment of the three raters who examined statements generated by the two approaches, the expectations of more specificity and more recency were not realized. That is, a number of runs of the Friedman et al. tests were performed on the data generated by the three questions, and the tests led to conclusions similar to the ones reached when the Grid data were used. Tables 24 and 25 display the outcomes of two such runs. In table 24, the
differences between the emphases faculty members place on
the five domains of activities are examined. The test
presented in table 24 is identical to the one performed on
the Grid data and reported in table 1. As can be seen from
the comparison of the two tables, the two tests lead to the
same conclusion of rejection of the null hypothesis of no
differences between domains, with teaching being the domain
most emphasized. The test only failed to replicate
faculty's emphasis on research reported in the first test.
Table 25 reports the test of the differences in emphasis
students place on the different models of performance using
data from the three questions. This test is to be compared
to the one reported in table 9 in which the Grid data were
used. Identical conclusions were reached. The null
hypothesis of no differences was rejected, and internal
processes was emphasized significantly more than the other
two models.
Table 24: Friedman et al. test of the differences between reported frequencies of domains by faculty members [Data generated by the three additional questions]

<table>
<thead>
<tr>
<th>Subject</th>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D1)</td>
<td>(D2)</td>
<td>(D3)</td>
<td>(D4)</td>
<td>(D5)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Ho: D1= D2= D3= D4= D5

Computed test statistic = 26.98

Critical test statistic = 9.49 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

D1 - D2 = 23.5*  D1 - D3 = 19*  D1 - D4 = 23.5*
D1 - D5 = 9    D2 - D3 = 4.5  D2 - D4 = 0
D2 - D5 = 14.5 D3 - D4 = 4.5  D3 - D5 = 10
D4 - D5 = 14.5

Critical test statistic = 19 , alpha = .037
Table 25: Friedman et al. test of the differences between reported frequencies of models by students [Data generated by the three additional questions]

<table>
<thead>
<tr>
<th>Subject</th>
<th>Goals</th>
<th>Syst.Res. processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M1)</td>
<td>(M2)</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Ho: $M_1 = M_2 = M_3$

Computed test statistic = 16.55

Critical test statistic = 5.6 to 6.5

Alpha is close to .05

Reject Ho

Multiple comparisons

$M_1 - M_2 = .5$  $M_1 - M_3 = 16^*$

$M_2 - M_3 = 15.5^*$

Critical test statistic = 11

Alpha = .049
As for differences in the character of the data generated by the two approaches, the three raters were asked to evaluate for every respondent whether they thought the statements generated by the three questions were more specific and of a shorter time span than the ones generated by the Grid. The answer to the first question was positive, i.e., the three questions generated more specific questions, less than 10% of the time. The rest of the time, the raters' assessments was that such statements were as specific or less specific than the ones generated by the Grid. As for time span of the answers, the raters thought the three questions generated more recent statements than the Grid about 30% of the time, while they thought they were as recent or less recent about 70% of the time.

In sum then, the three questions did not generate more specific or shorter term data, and did not lead to conclusions different that the ones reached using the Grid. Examining differences between students of the College of Business at OSU, and those of a local Business College

It was explained in the method section that an additional group of students at a local Business College were interviewed for the purpose of finding out whether schemas of performance held by individuals who were potential members of the focal organization but chose not to join it were different than schemas of current members. To examine whether this was the case, the Friedman et al.
test was performed on the data generated by the Grid in the interviews with students of the local College to find out whether the data displayed a pattern different than that for students of OSU. Tables 26 and 27 report the outcome of this test of differences in domains and models emphasized in the schemas of the students of the local College. As indicated in table 26, the null hypothesis of no differences between domains was rejected, and teaching was by far the most emphasized domain. This conclusion is similar to the one reached when performing the test on OSU students, reported in table 4. Also, table 27 indicates that the null hypothesis of no differences between models of effectiveness was rejected, and internal processes was emphasized significantly more than the other two models. This conclusion is identical to the one reached with OSU students and reported in table 9.

It seems then that students of the local Business College did not display any different patterns of the contents of their schemas of organizational performance than the ones reported for OSU students.

Summary of the findings reported in this chapter

1. The first hypothesis of the study that members of different formal constituencies would emphasize different domains of activities in schemas of organizational performance they hold was not supported.

2. The second hypothesis of the study that members of
Table 26: Friedman et al. test of the differences between reported frequencies of domains by students/Local college

<table>
<thead>
<tr>
<th>Subject</th>
<th>Teaching</th>
<th>Counseling</th>
<th>Placement</th>
<th>Social</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(D1)</td>
<td>(D2)</td>
<td>(D3)</td>
<td>(D4)</td>
<td>(D5)</td>
</tr>
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<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
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<td>3</td>
<td>0</td>
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<td>0</td>
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<td>7</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
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<td>4</td>
<td>3</td>
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<td>0</td>
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<td>0</td>
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</tr>
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<td>6</td>
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<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<tr>
<td>11</td>
<td>11</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Ho: D1 = D2 = D3 = D4 = D5

Computed test statistic = 32.18

Critical test statistic = 9.49 , alpha = .05

Reject Ho

Multiple comparisons

Computed test statistics:

\[
\begin{align*}
D1 - D2 &= 30.5^* \\
D1 - D5 &= 28.5^* \\
D2 - D5 &= 2 \\
D4 - D5 &= 2.5 \\
\end{align*}
\]

\[
\begin{align*}
D1 - D3 &= 25^* \\
D2 - D3 &= 5.5 \\
D3 - D4 &= 1 \\
\end{align*}
\]

Critical test statistic = 21 , alpha = .038
Table 27: Friedman et al. test of the differences between reported frequencies of models by students/Local college

<table>
<thead>
<tr>
<th>Subject</th>
<th>Goals</th>
<th>Syst. Res. processes</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(M1)</td>
<td>(M2)</td>
</tr>
<tr>
<td>1</td>
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<td>5</td>
</tr>
<tr>
<td>2</td>
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</tr>
<tr>
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<td>3</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

$H_0: M_1 = M_2 = M_3$

Computed test statistic = 16.55

Critical test statistic = 5.6 to 6.5
alpha is close to .05

Reject $H_0$

Multiple comparisons

$M_1 - M_2 = .5$  $M_1 - M_3 = 15.5^*$
$M_2 - M_3 = 16^*$

Critical test statistic = 11
Alpha = .049
different formal constituencies would not emphasize different models of performance was supported.

3. The third hypothesis of the study that members of formal constituencies would not emphasize different individuals as instrumental in bringing about effective performance was supported.

4. Examining the three dimensions of schemas explored in this study; domains of activities, models of effectiveness, and individuals most instrumental in bringing about effective performance, for all respondents taken as one group revealed the following pattern: teaching was emphasized more than any other domain, internal processes more than any other model, and administrators and professors more than any other individuals.

5. A qualitative analysis of statements classified as reflecting similar domain/model schemas for members of different formal constituencies resulted in the cautious conclusion that membership in formal constituencies is related to indicators of effectiveness adopted by members.

6. The three more direct questions did not lead to conclusions different than the ones reached with the Grid data, they also did not generate more specific or shorter time span responses.

7. Students of another local Business College did not display different patterns of schemas of organizational performance than the ones reported for OSU students.
CHAPTER VI
DISCUSSION

To put the findings of the study in an appropriate context that would foster a discussion of the contributions and limitations of those findings, the following points are stressed:

1. The study addresses the question of organizational effectiveness from the standpoint of members of the organization. It focuses on the bases upon which members assess effectiveness. Thus, the study addresses a serious problem with typical studies of effectiveness. In such studies, the definitions of effectiveness imposed by the researcher are the bases for the reported assessments of effectiveness (Angle & Perry, 81). Therefore, members' own assessments are not examined. Such assessments are expected to affect some important attitudes, strategies, and actions on part of these members (Connolly et al. 80, Romzek, 85). It follows that typical studies of effectiveness have failed to examine effectiveness assessments that are most critical for the organization.

2. In focusing on members' assessments of effectiveness, the study recognized the likelihood of multiple assessments by members. Different members assess
effectiveness on different bases. Thus, like the studies by Hoy et al. (84), and by Tsui & Milkovich (87), the present study adopts a multiple constituencies approach to the examination of assessments of effectiveness.

3. However, unlike these two studies, the present study places its examination of bases of assessments of effectiveness in a cognitive processing framework. This framework adopts an image of organizations as cognitively constructed realities by their members, and pays attention to the processes involved in such cognitive constructions. Adopting this image of organizations is especially appropriate for a study that attempts to investigate how members perceive of, and evaluate the performance of their organizations. Assessments of effectiveness are thus seen as cognitive processing of performance related experiences. Therefore, cognitive schemas of organizational performance which guide such processing are the construct examined in the study.

4. Adopting this cognitive processing approach enables the study to address the question of "constituencies" that are expected to assess effectiveness on similar grounds. Are members who relate to the organization in similar formal ways expected to hold similar schemas of organizational performance?

5. In exploring contents of schemas of organizational performance along three dimensions, the study has joined a
very small group of studies which have attempted to examine contents of schemas. In typical Social/Cognitive Psychological studies, researchers would arrange the different treatments of the experiment in such a way to enable them to assume that different schemas have been activated or recalled in different conditions. For instance, telling subjects that the tape they were about to see depicts the life of a librarian was assumed to evoke a role schema as to what librarians do (Cohen, 81). Seldom was such an assumption tested. An increasing number of researchers are getting interested in cognitive processes in organizational contexts. However, with the exception of a very few studies (Ford & Hagerty, 84, Ford & Kim, 85), contents of schemas which guide such processes were never explored.

6. Finally, in exploring contents of these schemas, the study utilized a methodology which relied on members expressing the criteria they used to assess effectiveness in their own words. No preset statements to choose from, or limiting questions to respond to. Therefore, the findings of the study are likely to closely reflect what these members used as bases for assessing effectiveness.

Within the context identified in these few points, the findings of the study are discussed. First, each of the major findings will be considered. Then, the limitations of the study are spelled out. Finally, a discussion of the
overall contribution that the study makes to our understanding of organizational effectiveness, or what does it all mean, is carried on.

**Major findings**

1. Is membership in formal constituencies of an organization associated with patterns of content of schemas of organizational performance?

   The tests reported in the previous chapter have indicated disconfirmation of the first hypothesis of the study that domains of activities emphasized in schemas of members of different formal constituencies are different. They have also indicated support for the second and third hypotheses that there are no such differences in the models of effectiveness emphasized, or individuals perceived as most instrumental in bringing about effective performance.

   These conclusions were reached in spite of two exceptions indicated by the tests: Unlike other groups, faculty members emphasized research in addition to teaching, and business recruiters emphasized system resources in addition to internal processes. These two exceptions are in line with what would be expected if the notion of association between formal membership and contents of schemas is valid. However, they were not sufficient to change the aforementioned conclusions because each was only reported
once by one test (multiple comparisons in the context of running the Friedman et al. tests on patterns displayed by each group), but failed to be supported by other, more direct tests (the Kruskal and Wallis tests of differences in patterns between groups). Moreover, these two exceptions can be accounted for by a rival explanation to be discussed shortly. The advantage of that rival explanation is that it can accommodate both the general conclusions of no differences between members of formal constituencies, and the two exceptions just noted.

Based on these conclusions of tests of the three hypotheses of the study, it is asserted that formal membership in the organization is not associated with systematic patterns of contents of schemas of organizational performance.

This is the first contribution that the study makes to literature on organizational effectiveness. To relate this contribution to the literature appropriately it is important to appreciate what it means and what it does not mean. It certainly suggests that the notion of constituency as typically defined in the literature, i.e., relating to the organization in a certain formal way, is not useful in understanding or predicting differences in bases upon which members make assessments of effectiveness. On the other hand, the study does not refute the notion of simultaneous multiple assessments made by different members who employ
different bases of assessment. It only suggests that formal membership is not a good predictor of differences in such bases. This was evident in the study when different individuals emphasized different domains or models suggesting that different individuals employ different bases in assessing effectiveness. However, the notion of formal constituencies failed to predict these differences. What this argument suggests in the context of the multiple constituency approach is that we need not abandon the notion of different bases of assessments being employed by different constituencies (Connolly et al. 80, Ford & Schallenberg, 82), but rather that we need to reconsider the typical definition of what a constituency is.

If members who relate to the organization in similar formal ways do not necessarily employ similar cognitive bases for assessing its performance, as suggested by the study, then who do? Who are similar and who are different in the bases they employ to assess effectiveness? The present study is not able to provide an answer to this question since it only examined, and refuted, formal membership as a possible basis for differentiating schemas of members. However, the literature reviewed in this study can be used to suggest a general approach for identifying who the members of constituencies are. This approach is capable of accommodating both the general conclusion of the study and the two exceptions of that general conclusion.
encountered in the study.

That is, the literature reviewed suggests that individuals who develop shared schemas through the use of language and other symbols, day to day and institutionalized interactions would have common bases for organizing their experiences with the object of the schemas, in this case performance of the organization. Therefore, the general approach suggested in this study for reconsideration of the definition of what a constituency is in the context of assessing organizational effectiveness is that members of a constituency are members who, through the use of symbols and interactions, come to share contents of schemas of organizational performance not shared by other members. It is these members who attend to the same activities as the major domains of performance that the organization should engage in, who employ similar models of effectiveness in judging that performance, and who consider similar individuals as most instrumental in bringing about effective performance. In short, it is those members who employ similar cognitive bases in assessing the effectiveness of the organization. It is therefore suggested that future research examine processes involved in communicating shared contents of schemas of organizational performance, and factors which facilitate those processes. These processes and factors should then be used to explain and predict who of the members of the
organization employ similar schemas of performance, i.e., who are members of the same "constituency" in terms of assessing effectiveness. This general approach to the notion of constituencies can accommodate the two exceptions reported in the study that faculty members emphasized research in addition to teaching, and that business recruiters emphasized system resources in addition to internal processes.

That is, faculty members did not emphasize research because they are members of a formal constituency, but rather because out of all the individuals interviewed they are the only ones who do research, who talk to each other about research, who communicate the methodology of doing research as well as the latest findings. In other words, the notion of formal constituency worked this time because it coincided with the notion of communicating unique contents of schemas among a number of members. My speculation is that if graduate students were part of the sample, then they too would emphasize research. A similar argument can be made for business recruiters emphasizing system resources. These individuals share one major responsibility each in his own organization, that of recruiting suitable college graduates. Therefore, they are constantly communicating within their own organizations, and not necessarily with each other across organizations, information about how different colleges "sell" their
graduates, opinions as to whether graduates of a certain college seem to be doing a better job adjusting to demands of real life jobs than graduates of another school, and so on. It is probably this kind of information and experiences that led to that emphasis on system resources, not simply being members of a formal constituency.

In sum then, the first contribution that the study makes to the literature on effectiveness is to suggest a re-examination of the definition of what a constituency is in the context of assessing effectiveness, and to suggest that such re-examination be based on considering the processes and factors instrumental in communicating shared contents of schemas of organizational performance.

2. Membership in formal constituencies relates to indicators of effectiveness.

The qualitative analysis of statements classified as reflecting similar domain/model schemas for members of different formal constituencies revealed that different individuals use different indicators. However, it also suggested that membership in a formal constituency is somewhat related to the type of indicators used. Statements classified as teaching/internal processes that were made by faculty members reflected indicators that were somewhat distinguished from those reflected in statements classified similarly that were made by staff members.

Again, this conclusion can be understood within a
cognitive processing approach. Members who relate to an organization in a similar formal way are likely to be engaged in doing similar things. All faculty members of a college teach. This provides them with a common base of experiences with that aspect of performance. Given that different faculty members adopt different models of effectiveness, such a common base of experience will sensitize those faculty members adopting a certain model to certain indicators of success in teaching. So, for instance, faculty members adopting an internal process model would be sensitive to indicators that relate to processes of interaction with students in classrooms. Staff members adopting a process approach would probably not emphasize the same indicators because they do not have the same kind of experiences with such processes. This notion of common bases of experiences probably explains why some statements classified as reflecting an internal process model that were made by faculty and students were similar in one particular respect. That is, they suggested the use of effectiveness indicators that have to do with processes of interaction between faculty and students in classrooms.

So, once more, similarities among members of a formal constituency, or across constituencies, can be traced to common bases of experiences, and hence can be understood in terms of a cognitive processing framework. This discussion then reinforces the general characterization adopted in
this study of assessments of organizational effectiveness as cognitive processing of performance related experiences. And an implication of this discussion is that the notion of formal constituency can be useful in understanding bases of assessments of effectiveness only if it is considered in the context of identifying similar bases of experiences. The appropriate utilization of the notion of membership in formal constituencies is in conjunction with an appreciation of contents of schemas held by members. An expectation can be made about the different indicators likely to be used by members of different formal constituencies holding different schemas.

3. Teaching as the major domain of activities, the goal model not emphasized; is there a confusion between domains and goals?

When no significant differences were found between members of formal constituencies, all respondents were considered one group, and differences in emphasis on the five domains, the three models, and the four groups of instrumental individuals were examined for the entire group. Contrary to the popularity of the goal model among many writers on effectiveness, one of these aggregated analyses indicated that the goal model was not emphasized in the schemas held by the majority of interviewees. A contribution to the literature on effectiveness can be made by offering an explanation of that contradiction, of why
such a popular model in the literature is not emphasized in the schemas of organizational performance held by the members interviewed. To offer this explanation, the conclusion of another aggregated analysis will be referred to. That other analysis is the one which indicated that, by far, the majority of individuals interviewed emphasized teaching over other domains of activity. That is, this conclusion suggests a strong agreement among members of an organization as to what the domain of activities which constitute performance of the organization is. In other words, it seems that members share an identification of a general sense of what the mission of the organization is; in this case it is to teach. It is possible that this general sense of "mission" was confused in many writings with an assumed general adoption of a "goal" model. This may be possible because in the assumptions of the rational world advocated by functionalist writings on organizations, goals derive from a sense of mission. Hence, if members of an organization seem to agree on a mission, then, being rational individuals, they will define goals through the achievement of which the mission can be fulfilled. It follows that when they evaluate the performance of the organization, they measure that performance against these goals. The findings of the study shows only one of the premises of this argument to be valid; members generally agreed on a sense of mission. Nevertheless, they did not
adopt a goal model to evaluate performance; did not emphasize planning for teaching, setting goals for quality of teaching, efficiency in classes taught and productivity in terms of number of students taught. It seems then that people do not go through the logic that functionalist writings assume they do. And hence, it seems that the contradiction between the popularity of the goal model in the literature and lack of emphasis of that model in the schemas held by organizational members is due to a confusion between a general sense of mission shared by members and an assumed adoption of a goal model. When these two dimensions of schemas were looked at in separate analyses though, it became clear that members agreed on a domain, but not on adopting a goal model.

As a qualification to this point, it could conceivably be argued that the strong consensus on a domain is peculiar to the College of Business. After all, it is a public institution that is created to provide education to citizens of the state. Whether this pattern is to be observed in other organizations is an empirical question.

4. Internal processes as the most emphasized model

One of the aggregated tests showed internal processes to be the most emphasized model for the majority of respondents. One possible explanation to this conclusion is that the model was favored by the Quinn and associates competing value framework used as a guideline to the
classification of statements into models. That is, that framework defined that model in a relatively broad manner to encompass processes relevant to human resources management, e.g., human resource development, personnel cohesion and morale, as well as processes relevant to communication, coordination, and management of information flows. However, this overemphasis does not seem to explain fully why that model was significantly more emphasized in the schemas of the interviewees than the other two models. The goal model was characterized in the Quinn framework by an emphasis on planning, goal setting, productivity and efficiency, and the system resources by resource acquisition, growth and external support. So even if the internal processes model was defined in a broad manner, the conclusion of the test still indicates that the majority of respondents emphasized management of human resources, information flow and communication over planning, goal setting, resource acquisitions and external support.

An interesting possibility is that this conclusion is related to the nature of the main domain emphasized in the schemas held by members; teaching. That is, it is such an intangible domain, one which involves slow and gradual process of transmission of knowledge in which it is very difficult to judge the quality of the outcome at any stage of the process. It may be that with such a domain people are not inclined to think of effectiveness in terms of
plans and goals, because they would not know how to evaluate plans or judge the attainment of goals.

As for the lack of emphasis on external support and acquisition of resources, it may be related to the fact that the College is part of a large University in which the support of other parts of the University is taken for granted by members. In other words, the larger University serves as a Buffer in the minds of individuals between the College and the external world.

Or it may be that the internal processes model is the one that most members are more inclined to employ in a wider variety of situations. It may be the one that reflects the aspects of performance that members feel closer to, and are affected by the most on a day to day basis. In other words, it may be that members of an organization, being the human resources of the organization themselves, would be inclined to emphasize a model of effectiveness which reflects management of human resources as its major focus, rather than formal plans, or external support that they feel distant from. Members then, in terms of the Quinn framework, have an internal vs an external orientation. In other words, maybe the arguments presented by the advocates of an internal processes model to effectiveness (e.g., Steers, 77) are valid after all.

These are empirical questions that can be addressed in future research on schemas of organizational performance of
members of different organizations to find out whether the strong emphasis on internal processes is unique to the College of Business at OSU, or fairly common. I am inclined to emphasize the uniqueness of each setting in which people develop schemas, and hence I would think twice before speculating that the pattern suggested in this study is common in other organizations until more research has supported it. After all, part of the mission of this study, being an exploratory one, is to suggest questions, provide exploratory answers to these questions, and hence generate enough interest in them that other research examine them in more settings and in more elaborate ways.

5. Administrators and professors are most instrumental in bringing about effective performance in the College

Members have emphasized teaching as the major domain of activities. They have also emphasized professors as individuals most instrumental in bringing about effective performance. In light of the fact that most people would agree that professors are the ones most directly responsible for teaching, it seems reasonable to suggest that individuals seen by members of an organization as most instrumental in bringing about effective performance are the ones who are most directly involved in the domain(s) of activities emphasized in their schemas.

As for administrators, they are not necessarily tied in to any particular domain or model examined in this study,
hence, it seems reasonable to suggest that they are emphasized in the schemas of members no matter what the emphasized domains or models are. This suggestion is motivated by a speculation on my part that people, no matter what the contents of their schemas of organizational performance are, share a cognition that administrators are the ones who run organizations, and hence are the ones who make them succeed or fail. This is another suggestion that needs to be examined by replicating the study with members of other organizations.

Students and staff members were not emphasized as instrumental in bringing about effectiveness. My guess is that students are perceived as the consumers of the College's services rather than contributors to its effectiveness. This guess is based on many comments to that effect made during interviews. As for staff, it may be that they are seen not as instrumental in effectiveness but as providing auxiliary services that supplement the major domain of teaching. In that sense, if they are seen as doing a fair job, they would not hamper teaching, but if they are seen as doing a poor job, then they would be perceived as detrimental to effectiveness.

6. More direct questions did not lead to conclusions different than the one's generated by the Grid data

The three questions of reasons for assessments given by respondents of the effectiveness of the College, events in
which the respondent felt the College was very effective or ineffective, and to list factors he would use if asked to assess effectiveness did not lead to conclusions different than those generated by the Grid data. Also, the statements generated by these questions were not judged by the raters to be more specific, or of shorter time span than the data generated by the Grid. There are two rival explanations to this observation. First, that these questions are as good as the Grid in surfacing such schemas. The other explanation is that responses to these questions have been influenced, in their content and scope by the statements they made just prior to them when responding to the Grid questions. There is no empirical way to favor one of the two alternatives since the order of the questions was the same for all the members. That was done to avoid adding any inconsistency to the data collection process, after all, the purpose of these questions was to explore different kinds of data, not necessarily to compare data collection approaches. As it turns out, no different kind of data was contributed by these questions.

7. Contents of schemas of students of a local College do not differ from those of Students of OSU

The two groups of students displayed similar patterns of emphasis on the three dimensions of schemas explored in the study. The purpose of that comparison was to identify whether members who had a chance to join the organization
but decided not to would be any different in their schemas of organizational performance than members who joined. It turned out that there are no such differences. What this suggests to me is that there is probably a great deal of overlap between the schemas those other students employ to evaluate their own College, and the ones they reflected in the study, and that there is probably not much difference in how students of two Colleges in the same city assess the effectiveness of their Colleges.

Summary of the discussion of the major findings of the study

The following points have been suggested in this chapter as contributions that this study makes to the literature on effectiveness:

1. The notion of formal constituencies is not useful in explaining and predicting differences in the content of schemas of organizational performance of different members of an organization. The suggestion was made to re-examine the basis for defining constituencies utilizing literature on the processes and factors involved in communicating contents of schemas among members of a social setting.

2. Popularity of the goal approach in the effectiveness literature was not supported in the study. A possible explanation was suggested that there may be a confusion between generally agreed upon domains of activities, and the assumed adoption of a goal model.
3. Internal processes model turned out to be the one most emphasized in the schemas held by members of the College, and the question was raised as to whether this conclusion is peculiar to the College or common among members of other organizations.

4. Professors were emphasized as most instrumental in bringing about effectiveness of the College, and it was suggested that this is tied to the emphasis on teaching since professors are likely to be thought of as most responsible for the effectiveness of teaching. Also, administrators were emphasized as most instrumental, and the question was raised whether this would be a conclusion common to schemas of members of other organizations since administrators are likely to be perceived as responsible for performance of the organization no matter what domain of activities or model of effectiveness is emphasized.

Limitations of the study

A number of limitations of this study can be identified. Some of them have to do with the dimensions of schemas studied, some with data collection procedures, and some with data analysis. These limitations are discussed here.

1. The three schema dimensions studied; an issue of construct validity.

Throughout the discussion of the findings of this study, references to the bases upon which members assess
organizational effectiveness were actually references to domains of activities, models of performance, and instrumental individuals emphasized in the schemas of organizational performance held by members. That is, these are the three dimensions that were studied in this research as critical dimensions of schemas of organizational performance. Conclusions about the nature of the bases of assessments of effectiveness, and whether members were similar in such bases, were based on examinations of the contents of these dimensions.

The choice of these three dimensions was based on arguments presented in the third chapter which suggested that the three dimensions are relevant to cognitive processing of performance related experiences. However, these arguments could not claim that these are the only relevant dimensions of schemas of organizational effectiveness. In fact, after the data has been collected, a suggestion was made that the level of expectations could be thought of as a critical component of schemas of organizational performance. It is not only what domain of activities I look at, and what model of performance I employ that influence my assessment, but also how much I expect on that domain. If faculty and students emphasize teaching and evaluate it on a process model, are they similar in the quality of teaching they expect from a college?
The point is that other dimensions can be thought of as relevant to cognitive processing of performance related experiences. Therefore, the choice made in this study of examining these three dimensions raises an issue of construct validity. Are the conclusions drawn in this study relevant to bases of assessments of organizational effectiveness generally utilized by members of an organization, or to a partial operationalization of such bases? This limitation has to be made explicit so that the conclusions of the study can be appropriately considered.

2. Difficulties with the Grid

Although the Grid produced comparisons and statements other techniques could not reveal, using it with sixty six individuals in this study demonstrated certain difficulties.

First, the technique is very demanding of the respondent in terms of mental effort. Rather than being asked to describe an organization for instance, the respondent is asked to consider three of them simultaneously. Such comparison is not in a general way, in which case he could probably find more ways to think and compare, but specifically in terms of what they have to do to be effective. Furthermore, he is asked to compare them so that two of them would be similar and the third different. It was a standard reaction of respondents to pick the card with the names of the first three
organizations in hand, look at it for a minute, attempt to give a quick comparison but decide not to, probably because it does not fit the instructions, and finally look at me with a smile and say: this is tough! Although the majority of respondents got over this initial period quickly, particularly with the help of the example left with them as a guide on a card throughout the Grid phase of the interview, a few respondents never really passed this stage of helplessness. They are the ones that I suspect are less discriminating and less cognitively complex than the rest. Some of them took relatively long time to come up with very few comparisons, some of them openly indicated discomfort with the interview throughout the Grid phase, and only started to give relatively detailed responses to questions in the second phase of the interview.

Secondly, the technique does not allow for comparisons in which the three organizations would be similar; one of them has to be different. A number of respondents expressed frustration with this particular aspect of the technique stating that they have a point to make that they think is significant for the effectiveness of the organization, yet they could not express it because all three organizations are similar at that point. An example of such a situation is if someone has a deep schema of what successful organizations are in general, regardless of any peculiar aspect of any specific organization. Such a deep schema
arguably provides a certain commonality between schemas he employs to assess effectiveness of any organization. This commonality may arguably not be surfaced when the person compares organizations on the condition of finding one of them different. Although I tried to encourage them to express these points in the second part of the interview, it should be mentioned that the technique, as it stands, is not designed to reveal dimensions of schemas on which the three compared objects are similar.

Thirdly, the technique asks respondents to think of differences between organizations. How different is different? Again the more differentiating individuals could see differences in degree of a particular dimension and report them as differences, while other individuals would have to see bipolar contradictions to report differences. So, it seems that the technique is capable of producing more, and perhaps richer, information about the schemas of more cognitively complex and differentiating individuals than others.

Fourthly, the comparisons respondents made are a function of the particular choices that respondents made of organizations to compare to the College. Respondents were instructed to pick organizations they were most familiar with, on the premise that more and deeper dimensions of schemas of organizational performance would be surfaced when examined in the context of comparing organizations a
person is familiar with than if he compared organizations he only had a shallow familiarity with. That premise seemed to hold for most respondents since they did not seem to have a difficulty choosing four organizations they are most familiar with; they likely were not very familiar with many organizations to begin with. For that majority of respondents, the choices they made have likely facilitated surfacing the deeper and more salient dimensions of their schemas. However, for a few respondents the choice was not that clear. These are the respondents who had familiarity with great many organizations. Therefore, there was not a meaningful guide that I could give them as to which organizations to choose. They picked four organizations, but could probably pick another set of completely different four organizations. Contents of schemas reported in the data depended to a great extent on the comparisons made, which in turn depended on the particular organizations picked. Hence, the possibility of surfacing and reporting different contents of schemas had these few individuals picked other organizations is to be kept in mind when examining contents of schemas reported in the data.

3. The tradeoff between subjective data and collective analysis.

The reported findings are a function of the classification schemes of activities (teaching, placement, etc.), and of categories of individuals most instrumental
in bringing about effective performance (professors, administrators, etc.) that I suggested and the raters approved. Had there been other schemes used, maybe different patterns would have emerged.

The findings are particularly a function of the Quinn and associates competing values framework used in classifying statements into models of effectiveness. Definitions of the three value dimensions used in structuring the framework, and descriptions of each model along these dimensions were the basic guidelines used by the raters figure out which model was emphasized in a statement. Had another set of definitions of the models been used, different patterns of contents of schemas may have been observed.

To appreciate this limitation, it could be argued that each respondent would have his own labeling of his statements along these dimensions if asked about it. Such individual labeling by respondents would have revealed their own systems of categorization, and hence could have provided better descriptions of the content of their schemas. However, the need to examine patterns of such categories across individuals dictated that a limited number of general categories be defined and used by raters in classifying statements. These schemes of general categories were defined by me. This implies that the subjective statements made by the respondents in the
interview were complimented in the course of the analysis by the judgments of the raters as to how these statements fit into a certain predetermined scheme. This procedure removes the data one step away from its original subjective nature, and makes the findings of the study a function of, not only the spontaneous responses of the participants, but also the logic of the classification schemes. This departure from subjectivity is carried on in the study to make it possible for the data to examine hypotheses on shared patterns of schemas among many individuals. Such departure would have not been needed had the study looked exclusively on unique contents of the schemas of performance held by each respondent, in which case the study would have been of little consequence to the present literature on effectiveness. The data collection and analysis choices made in the course of conducting the study, i.e., using the Grid to surface subjective statements and then classifying those statements on predetermined schemes, represent my attempt to deal with the tradeoff between the need to generate subjective, rich data which uniquely expresses one person's cognitions, and the need to answer questions of cognitive structures on the level of collectivities of individuals. In making these choices, I realize that there is no way to greatly satisfy the requirements of subjectivity, and collective analysis in one study at the same time.
Tied into this set of limitations is that the findings are also a function of the cognitive schemas of the three raters, and the dynamics of the meetings in which they reconciled differences in classifications. That is, the raters received the same written and oral guidelines as to how to classify statements. However, these statements can typically be thought of as vague information that the raters had to process. Such processing is guided by their own cognitive structures, which are unique in some respects. Such uniqueness leads to different classifications, and hence different contents of schemas reported, in spite of the common guidelines. Such differences are expected in such a process, and were evident in the study when at least two of the three raters agreed in their classifications about 82% of the time. This suggests that they went in three different directions 18% of the time. A different group of raters might have come up with different classifications some of the time.

Also, what went on in the reconciliation meetings have affected the findings in those 18% of the cases that the raters initially disagreed on. Who was more tired or pressed for time? Who felt more pressured to conform? The three raters who helped in that study did a very professional job managing the process of reconciliation. They would adjourn a meeting as soon as it became evident that they got tired. They encouraged debates when
necessary. However, even with these practices, the outcome of those meetings may have been different had they been held in different conditions and managed differently.

4. Assumptions of the statistical analyses.

The findings are a function of the validity of a central assumption behind the data analysis process. This assumption is that the salience of a dimension of schema is reflected in the frequency with which that dimension was emphasized in the statements made in the course of the interview. That assumption makes sense since the more times a dimension is emphasized in the course of several comparisons, the more likely it is to be a salient aspect of a schema; one that surfaces many times in comparing different combinations of organizations. However, that does not preclude the possibility that for some respondents, a dimension that is emphasized only a few times may be more salient to the schema holder than another dimension that he uses in more comparisons. That is, the former dimension may be involved in more serious comparisons; ones that have more valued consequences for the effectiveness of the organization as assessed by the person. To the extent that this may be the case with some dimensions surfaced by some respondents some of the time, the findings do not necessarily reflect what the individual assesses to be the more salient dimensions of schemas.
5. Sample size, and the issue of the power of the test

The number of participants ranged from eight to eleven per group of members. With this range of sample size, the statistical power of the Friedman et al. tests, and of Kruskil/Wallis tests performed to test the hypotheses is bound to be relatively low. A calculation of the power requires a determination of an underlying distribution and a specification of alternate hypotheses. However, with that sample size range, power is expected to be low compared to studies in which sample sizes are larger, permitting thirty or more subjects per group.

Low power is especially a concern in this study. A low power indicates that the ability to reject the null hypothesis when it should be rejected is low. Most of the statistical tests performed in this study have led to a no rejection of the null hypotheses. The question is then, are the conclusions of no difference between formal constituencies a function of low statistical power?

Two observations are relevant when addressing this limitation. First, it should be noted that, given a certain sample size, the power of these non parametric tests is higher than the power of equivalent normal distribution, parametric tests. Secondly, I sought advice on this issue from a co-author of the non parametric statistics text that was utilized as a guide to statistical analysis of the data. He suggested that even with the sample size and the
relatively low power, if there were significant differences between the groups, then the tests would have revealed such differences.

The overall contribution of the study, or, what does it all mean?

Given the approach taken in the study, its findings, and its limitations just discussed, what does it all mean? How does it improve our understanding of organizational effectiveness? Does it recommend substantially different ways of thinking about effectiveness and of doing research on the topic? The following comments discuss that overall contribution:

1. The study found that members of an organization assess its effectiveness on different bases. Therefore, when we examine the relationship between structure, context, decision makers' strategic choices, or other such variables and effectiveness, we should ask: effectiveness as seen by whom? A conscious choice has to be made as to whose perspective is being considered when examining the relationship between effectiveness and other variables. Researchers have to be ready to measure multiple assessments of effectiveness. And in reporting results of such research, we should see less of the statement that decentralization for instance was related to effectiveness. We should rather see more of the statement that a certain strategy for instance was effective from the perspective of
certain members, and not effective from the perspective of some others. But who would these members who see effectiveness similarly be?

2. The study found that type of formal membership in the organization was not related to patterns of the content of cognitive bases upon which members assess effectiveness. Therefore, in identifying the certain members who see effectiveness similarly referred to in the previous point, we should not automatically think of them as members with the same type of formal membership. Studies that take a multiple constituency approach, and assume, for instance, that managers of an organization will assess effectiveness on similar grounds are not justified. So, how should such studies proceed to identify members who assess effectiveness similarly?

3. The cognitive processing approach adopted in the study suggests that members who share common schemas, and have similar bases of experiences are the ones who will assess effectiveness on similar bases using similar indicators. Research should hence attempt to identify who of the members assess effectiveness on similar bases by devoting some attention to processes involved in developing shared schemas and common bases of experiences among members of the particular organizations under study. So, we should see less of the typical study which distributes a questionnaire asking members how they feel about the
achievement of the goals of the organization. We should see more of studies that include an additional stage of data collection. In that stage, cognitive complexities of members, previous bases of experiences they may have, patterns of social interaction they engage in, and patterns of exposure to linguistic and other organizational symbols are investigated to find out how they relate to the development of shared schemas of organizational performance. Therefore, it is expected, for instance, that research may make the following kind of conclusion: a certain strategy is seen as effective by members of this organization who engage in certain kinds of social interaction and who communicate certain organizational symbols. The same strategy is seen as ineffective by members who engage in different such patterns.

4. And to be able to make such a conclusion, researchers may have to be ready to measure assessments of effectiveness differently for different members. Once it was found that certain patterns of interaction are related to certain common patterns of contents of schemas of organizational performance, it may be appropriate to measure the assessments of different members with different measures. If certain members adopt a goal approach, it is probably appropriate to measure their assessments of effectiveness by asking them how much the organization achieves its stated goals. If other members adopt a system
resource approach, they should be asked about the extent to which the organization is successful in securing valuable inputs from the environment.

Such recommendations obviously represent a substantial departure from typical practices in effectiveness research. However, if we are to improve our understanding of how members of organizations assess the effectiveness of their organizations, and continue to use effectiveness as a criterion variable upon which to assess the effect of various programs, decisions, strategies, contextual and structural arrangements, at least some research should devote energy to such careful clarification of, and multiple measurement of assessments of effectiveness.

Suggestions for future research

Some suggestions were made in the course of discussion for future research. This section summarizes the more important of these suggestions:

1. Future research should examine the processes and factors involved in communicating contents of schemas of organizational performance, and use the findings of these studies to redefine the notion of constituencies in the context of a multiple constituency approach to effectiveness.

2. There is a need to replicate the study with members of different organizations to examine whether the patterns reflected in this study are common among members of many
3. It is probably beneficial to examine contents of schemas of an organization in the more general sense since members' responses in many interviews indicated a possibly strong overlap between such schemas of what the organization is and schemas of performance; of what the organization does. Examining schemas of organizations in the more general sense in future research may thus provide more information about how members perceive of their organizations, which may shed more light on understanding how they assess its performance.

4. Being of an exploratory nature, the study confined itself to an examination of the content of the schemas rather than an investigation of cognitive processing that involves these schemas. Future research should extend to examine how these contents of schemas organize for members their experiences with the performance of the organization, and thus affect their assessments of its performance.
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APPENDIX A

Data

Respondent 1

Comparison: service; does not have to make money
Statement # 1: created to educate
# 2: meet needs of students
# 3: keep up with technology
# 4: bring in qualified people

Comp.: create minds that can think; not necessarily sell
anything/ talent of students
# 5: many goals; many things to teach
# 6: always changing

Comp.: Want to educate people
# 7: purpose; a rounded personality; more than one
talent, next generation is a multi-career generation;
prepare students to contribute to others

Comp.: need support staff
# 8: important to have competent staff support; e.g.,
papers to be typed; professors should be confident in that.

Coma.: would not have to deal with union
To be effective with its labor given that there is no
union to deal with, the college has to:
# 9: seek balance between research and teaching ability
(of its faculty)
# 10: civil services tests have to be passed by staff

Comp.: concerned with politics
# 11: if large accounting firms donate money, college
has to listen to their points of view, their methods, even
teach these methods. Same for Public Administration with
government politics

Comp.: does not have to do as much advertising
# 12: advertising is not a main focus, the college
still has a reputation

Reasons for assessment of effectiveness, events indicating
effectiveness, and list of factors considered when assessing effectiveness

# 1 R: some programs good, some bad
# 2 E: counseling; needs a lot of work.
# 3 E: terrible to have foreigners teach complicated subjects
# 4 E: a fine job helping students get employed
# 5 E: good professors producing good students
# 6 E: student organizations supported by school;

helpful
# 7 F: teaching the skills needed to become employed
# 8 F: actual hands on placement efforts
# 9 F: getting qualified people to teach

Respondent 3

Comp. & # 1: doing research
Comp. direct teaching
# 2: effective to the degree that you are evaluated by your students as being an effective teacher
Comp. a bit more practical (vs. theoretical) social science
# 3: relatively applied social sciences; research being of interest to practitioners
Comp. relatively long time orientation for success of individuals
# 4: short time success of individuals is much less of a criterion for effectiveness than other organizations
Comp. & # 5: things in the College are related to each other (not self contained as in other organizations)
Comp. a mission of educating practitioners
# 6: effectiveness indicated by success in filling openings, scores on post-course evaluations, how many times can a continuing course be offered before demand of students drops off
Comp. Ph.D. required for faculty
# 7: stiffer requirements for admission are a measure of effectiveness
Comp. educational mission on a large scale
# 8: number of students educated
Comp. line organization/ faculty engaged in primary mission
# 9: effectiveness is evaluated in a direct product sense; directly doing research/ working with students (not supporting other people do things)
Comp. communication with other organizations/ particularly written communications
# 10: ability to write and get papers published

Reasons, events, and factors
# 1 R: run some continued education courses, but not as many as they should
# 2 R: quality of students recruited
# 3 R: faculty pretty good
# 4 R: MBA ok but not as good as in many places
# 5 R: publication rates are very good, and some professors have very good reputation
# 6 E: tenure decision processes do not reflect 100% criteria announced for them
# 7 E: successful defense of dissertations
# 8 E: undergraduates expressing interest in things professors taught in class
# 9 E: school hosting a conference; individuals with the Business school and structure supporting these conferences
# 10 F: successful teaching of students; graduation, getting jobs
# 11 F: research published and funded
# 12 F: graduate students to finish and find jobs

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Respondent 4

Comp., preparing you for a job
# 1: success rates in getting jobs by students
# 2: reputation
Comp., large/ put you through a system
# 3: systematic, keep exams fair, common exams, curve exams
# 4: professors keeping certain amounts of hours for office hours
# 5: good communication in the offices among professors
Comp., teach people in a set amount of time
# 6: hire quality teachers, fire them if they cannot teach in that set amount of time
# 7: evaluation system to avoid attitudes of slackness
Comp., have to maintain a certain level of / students have certain GPA's
# 8: keep college standards, reputation up to be able to pull students in .. relying on reputation
# 9: keep effective teaching
# 10: keep effective research
Comp., very competitive hierarchy of management/ politics involved
# 11: competitive hierarchy is good; keeps high level administrators on top; performing well
Comp., students have to be satisfied not outsiders
# 12: good social atmosphere
# 13: informing
# 14: people who know about the age of students and what is attached to it
# 15: good professors
Comp., admission aimed at one group
# 16: a student body that orients the teachers, rather than teachers doing the talking
Comp. a general organization (versus being religious)
  # 17: socially responsible for all groups/ all religious and secular groups/ prepare them to live in such an atmosphere
Comp. certain amount of money flow to keep system going
  # 17: keep students to get the money coming in
  # 18: also, someone to spend it wisely
Comp. prepare students for the business world/ a broad preparation
  # 19: broad variety of business based jobs/ as contrasted to a technical institution
Comp. & # 20: give core business courses
Comp. a certain group of people
  # 21: use appropriate analogies, e.g., sports, drinking beer, etc.
  # 22: let students know what is going on

Reasons, events, and factors

  # 1 R: not a small size
  # 2 R: placement rate
  # 3 R: not a liberal arts college
  # 4 E: teachers coming from OSU; very effective in a smaller atmosphere
  # 5 E: hate the large University atmosphere; your name versus a social security number
  # 6 F: social atmosphere
  # 7 F: size
  # 8 F: reputation
  # 9 F: tuition
  # 10 F: reputation of teachers
  # 11 F: location in a business district
  # 12 F: number of honorary organizations you can be in
  # 13 F: availability of courses

Respondent 5

Comp. service role
  # 1: teaching side; students get education and counseling
  # 2: faculty; teach and be supported in their research
  # 3: staff; to support both students and faculty, and be rewarded in their own jobs
  # 4: what students see as a free cost to them, like counseling and ability to be in student organizations as a means of applying their knowledge from classrooms
  # 5: offer different programs to students; internships, interviews with companies, availability of part time jobs, placement office
Comp. educate students
  # 6: give a basic general education in their majors to pursue a career; enough knowledge to be trained on a job
Comp. public role, reputation upon which students choose schools and majors
   # 7: brochures, printed materials
   # 8: public relations of faculty meeting outside University
# 9: students: how they speak of education, and how well they perform on the job

Reasons, events, and factors

   # 1 R: there is room for improvement, but college is always seeking to improve itself
   # 2 E: recognize faculty, staff, students; pace setters, outstanding teachers, outstanding staff
   # 3 E: not replacing staff, not increasing staff in the same proportion as faculty
   # 4 F: teaching, as evaluated by SET's
   # 5 F: service: faculty and staff serving the needs of students and the public
   # 6 F: whether faculty have opportunity to make a name for themselves, and get support in the area of research
   # 7 F: good work environment: feelings of support by faculty and staff in what they do, whether positive feedback is given to them.

Respondent 6

Comp. perform a service
   # 1: prepares people for their future/ life career
   # 2: best job making sure they respond to needs of community, e.g., illiteracy of high school graduates, how do you respond to that, what do we as faculty want to be/ do in the future; should we take another direction
Comp. be personable, available
   # 3: do not look at customers as statistics
   # 4: availability of staff and faculty to students, needs of students differ, e.g., a foreign student may need more attention, need to be responsive
   # 5: just walking down the hall saying Hello.
Comp. and # 6: need to effectively advertise
Comp. be professional
   # 7: mission is to prepare people to work in their careers and futures, so if someone comes here, has to be treated well; reception
   # 8: how the place looks, and the way the work is done should be state of the art; equipment, rooms available to do things in
   # 9: responsive to needs of community, e.g., training
Comp. not bend to pressure
   # 10: integrity and ethics
Comp. & # 11: approach customers as a person, not a statistic
Comp. good leadership, need to listen and respond
  # 12: honesty
  # 13: work as hard or harder than anybody else
  # 14: be informed about what happens
  # 15: respond to what comes into your office
  # 16: caring
  # 17: not promote people to the level of their incomptence
  # 18: expertise to do the job

Reasons, events, and factors
  # 1 R: a bias against promoting women in the staff
  # 2 R: recognize your efforts but not adequately compensate it
  # 3 R: learned a lot, and was able to make the job what I want it to be
  # 4 E: see good people try to make the place center of excellenc, however barriers in the administration that they cannot get through
  # 5 F: responsiveness to community
  # 6 F: being state of the art; the way business is conducted
  # 7 F: outstanding staff members
APPENDIX B

Instructions to raters

Background

The study attempts to explore contents of schemas of organizational performance held by members of an organization, as such schemas are proposed to be among the more relevant cognitive bases upon which members assess the effectiveness of the organization. Within a multiple constituency framework, the hypothesis has been advanced that members who relate to the organization in a similar "formal" way evaluate its performance on similar bases; in terms of the current study, share similar contents of schemas of organizational performance. This hypothesis is being put to test in the study using the College of Business as the focal organization.

Method

Students of the College, faculty members, staff, recruiting officers from companies which hire our graduates, and students from another local College of Business were interviewed. The Reportory Grid (Kelly, 55) was used to surface schemas of organizational performance held by participants. Rather than asking people how they think about the College, the technique calls for
comparisons between the College and other organizations the person is familiar with, on the premise that comparisons will produce deeper, and otherwise unattended to dimensions of the schemas. In the context of the current study, each participant was asked to select a number of organizations s/he is familiar with, and engage in triad comparisons between two of them and the College in terms of things they have to do, or to be to be effective, regardless of whether these things are present now or are not, so that two of the three organizations would be similar and the third would be different in any particular comparison. After giving as many comparisons as possible using the different combinations, the participant is asked to explain what he meant by the comparisons in terms of the effectiveness of the College in particular. At that point, respondents either use statements to further explain what they meant, or merely repeat the comparison expressing their perception that the comparison is self explanatory. A sample of five responses are attached, and as you can see, the format of the data for this part of the interview does not always follow one clear pattern. In spite of being given identical instructions, participants , as you may expect, differed in the way they responded. Some statements refer to the roles and positions of the respondent, others to roles and positions of others, yet, others refer to an overall sense of the organization. Sometimes, the
participant would make comparisons between characters of organizations in general, rather than focus on what would make them effective (indicating possibly an overlap between schemas of what the organization is and what it does), other times, the comparisons are too brief and the participant resists any attempt to get them to explain or elaborate. In some instances, the participant would respond by explaining what he means by a particular organization in a general way, in other instances they would explain what they mean by giving specific reference to aspects of the performance of the College as they currently see it. All this is really to be expected given the nature of the technique and the fact that I am sacrificing structure in the format of responses for richness of their content. So, even when the responses seem to be somewhat vague we will have to work with that and try to make sense of it bearing in mind that schemas are supposed to be abstract and not very specific in a lot of instances.

In addition to the Grid, some more direct questions were asked, partially to compare the kinds of dimensions of schemas revealed by the Grid vs. the more direct questions. In that context, each participant was asked to rate the effectiveness on a scale of one to five, and then to give reasons why s/he gave the rating s/he did. Next, they were asked to recall events in which they instantaneously felt that the College was very effective or very ineffective.
Finally, they were asked to simply list factors they would considered if asked to assess the effectiveness of the College.

Your task!

You are to take each one of the statements resulting from the Grid, as well as each reason, special event, and factor given by the respondent and evaluate it on four dimensions, which are the four dimensions of contents of schemas of organizational performance I am looking at in the study. These are: 1) the basic domain of activity reflected in the schema, teaching/research, etc.; 2) the model of effectiveness adopted, goal, internal processes, system resources; 3) whether the statements relate to structure, technology, size, environment; and 4) who the individuals are who seem to play a significant role in bringing about, or hindering effectiveness.

The mechanics of the task are simple. I have indicated in the data that I will give you (please refer back to the five respondents' sample enclosed) what the statements, reasons, events, and factors given by each person which are to be evaluated by giving each of them a number. (Please note that there are two counts; one for the Grid statements, and another for the rest). In the case of the Grid statements, I included the basic comparison from which a number of statements stemmed (that number can of course...
be just one statement for a comparison, or it can be many such statements) to provide you with the context in which the statements were said, which should help you evaluate the content of these statements. When the person did not provide any elaboration on the basic comparison, I simply put the comparison itself as a statement to be evaluated, and indicated that by calling it "comp. and stat. # --". As for reporting your evaluations of the statements on the four dimensions, I have prepared a sheet, a copy of which is enclosed, which requires you to indicate the number of the respondent, and the number of the statement that you are evaluating, and mark the cells in that sheet which you judge as being reflected in the statement. Additionally, if you wanted to make any additional remark concerning any particular statement, or a general comment, please put it down on a separate sheet.

As for the content of the evaluations, it is clear that there is no right or wrong classifications or answers, just what your judgment is of any particular statement. However, here are some basic and rather general guidelines that should help provide a somewhat shared frame of mind for our evaluations:

1) The first group of classification is relatively straightforward; whether you think the statement describes effectiveness in terms of one of the activities listed in the sheet; teaching, research, etc.
2) The second group of classification is not as straightforward; what model of effectiveness you think is being reflected in the statement. To help us make that judgment, the Quinn competing value framework is utilized. I have enclosed a three page copy of that frame. In the first page, you find a layout of the framework; value dimensions that would suggest an emphasis on one model rather than the others. Please note that, compared to the reporting sheet which I prepared, Quinn lists one model too many. For the purposes of my research, the two models that he labels "human resources" and "internal processes" are to be lumped together under the label "internal processes". On the second and third pages of the copy of the framework, you find statements in which Quinn explains in general terms what he means by each of the values shown on the framework. We want to evaluate the models of effectiveness reflected in the statements using that framework. However, I want to emphasize that the framework is rather general, and that I feel you will have to supplement it with your own judgments as to whether a statement is reflective of one model versus the others.

3) The third group of classifications concerns whether the statement refers to effectiveness in terms of structure, technology, environment, or size. For the sake of the study, structure refers to the classic concept of rules and regulations; in other words, formalization, specialization,
and centralization. So the question would be: is the respondent specifying any such rules that the organization should have to be effective. Technology is to be thought of also in the narrow, technical sense. Is the respondent referring to conditions of equipments, technical skills, specific knowhow in particular areas that the organization should have to be effective. Environment would be relevant only if the respondent is expressing requirements of effectiveness in terms of relations with parties outside the immediate boundaries of the organization.

4) That again is self explanatory; whether the statement reflects a major role in bringing about, or hindering effectiveness, by any of the classes of members specified on the sheet.

5) Finally, after evaluating all statements made by any member, please look back at the statements generated by the Grid, and those generated by the R, E, F's, and indicate in the last two columns of the sheet whether the latter group, overall, reflects a) more specific; less abstract and probably more detailed aspects of performance, b) shorter time orientation, and more recency than the former group. A y vs. a n will be sufficient to indicate an affirmative or a negative answer to these two questions, while a blank will indicate that a determination is not made one way or the other.

Notes
* Again, to provide a shared frame of mind, let us think of students as customers of the College rather than as somehow being part of the personnel.

* Classifying any statement as falling in any particular category (within any one of the four dimensions) does not preclude it from being assigned to another category, categories are not necessarily mutually exclusive. Hence, a statement can be classified as teaching, and service for students for instance if you feel that this is the more appropriate way to see it.

* On the other hand, if you feel that a particular statement does not fit any of the categories within one of the four dimensions, you should simply leave it blank.

Our assignment for first meeting

It would be helpful if we tried to carry on the evaluations of statements made by the five respondents in the enclosed sample, so that we can identify any major disagreements in our mind sets, and also identify any potential problems with the entire scheme, such as lack of clarity of instructions, etc. Needless to say, any suggestions as to better ways to carry on the analysis are most welcome. I hope you find the entire exercise stimulating and useful.
HUMAN RELATIONS MODEL

OPEN SYSTEMS MODEL

Flexibility

Ends:
Value of Human Resources

Means:
Cohesion

Means:
Adaptability

Ends:
Resource Acquis

INTERNAL
FOCUS

Means:
Information Management

Ends:
Stability

Means:
Planning

EXTERNAL
FOCUS

Ends:
Product

Control
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APPENDIX C

Classifications of statements made by a sample of five respondents